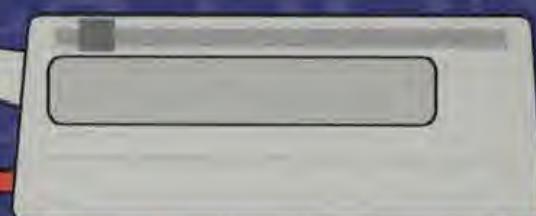
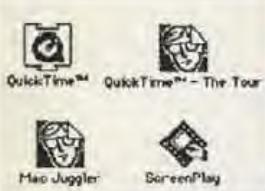


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FEBRUARY 1992



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Apple2000

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Apple2000 supports users of all the Apple computers. The **ITT 2020**, **I, II, II+, //e, //c, //c+, IIgs, IIgs+, //, Lisa, XL, Mac 128, 512, MacPlus, Classic, Classic II, SE, SE/30, Mac LC, II, IIIs, IIcx, IIci, IIx, IIfx, Quadra, Portable and PowerBooks**

Contributions and articles for the magazine are always welcome. We can handle any disk size or format. Send to PO Box 3, Liverpool, L21 8PY

NOTE:

Any articles of specific interest to Apple II, Apple IIgs and Apple // users are printed in the front half of the magazine, while those relating to the Macintosh and Lisa are at the back. Look for the page icons.

Key:

 Apple II, //e and //c

 Apple //

 Apple IIgs

 Macintosh, Lisa

 Macintosh II

Apple2000

February 1992

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There are a number of ways to contact Apple2000

If you wish to order goods or services from Apple2000 or just leave us a message, call Irene on  (Ansafone during the day). Alternatively you can Fax your order to  or write to the PO Box. If you use comms you can leave orders on TABBS addressed to the SYSOP or contact us on AppleLink (BASUG.1).

If you are experiencing problems with Apple hardware or software Dave Ward and John Arnold run the Hotlines and will try and help you solve it.

We are very interested in the activities of local user groups, and if you have any information which you would like publicised John Lee would like to hear from you.

We reserve the right to publish, without prejudice, any advice or comments given to members as a result of letters received, in the journals of Apple2000.

A little praise for a few of our authors wouldn't go amiss. Send all comments, and contributions, via the PO box, especially suggestions about what you would like to see in your magazine.

Chairman's Corner

Apple2000 1980-1992

□ This is the first issue of the Apple2000 magazine in 1992 and brings with it a crucial year for Apple UK. We expect the announcement of new dealer price structures shortly and the availability of the lower end machines direct from High Street outlets. This will put Apple on a tightrope. No longer are they in the high price, high profit margin, safe position they have held for so long. The cut throat market place is where we see them placed now. All the recent price cutting of Macintoshes has been reflected by the drop in PC clone prices. A Macintosh for £750 may seem a bargain, but offset this against a full colour VGA 386 PC for the same price!

The new low prices of Macintoshes is affecting software prices at last. An integrated package like ClarisWorks, BeagleWorks or GreatWorks can be bought for around the £100 mark. A complete working system with computer software and printer will cost you about £1500 including VAT, the educational price is only £900 + VAT.

□ Changes have also happened to our magazine. We have long printed in Bookman and Avant Garde typefaces. With this issue we change to Stone. This face was only drawn a few years ago and so is quite modern. We hope the changes will make reading of the magazine easier for those with poorer eyesight. Let us know how you like the new look!

□ The Apple II scene is also changing. System 6.0 is not yet with us for the GS but has been spied in dark corners. It brings with it a break from the need to format all your disks with ProDOS. It now supports HFS format as well as ProDOS. Note that the emphasis is on HFS format, and not Macintosh. This simply means that both the Mac and the IIgs can use HFS formatted disks. It does not mean that either can share each others files, though standard text files can be read by word processors on each side. There will be other files that can be shared in due course. System 6.0 is an exciting development and brings with it a harmonising of the Finder with the Mac. It is however nearer System 6.0.x on the Mac than the newer System 7.0!

We see dealer support for the Apple II shrinking as time goes on. This will not affect Apple2000. We shall continue to support ALL Apple computers. We are aware that a great deal of our Apple II members are actually beginners. We are going to address their needs more closely in the future.

Ewen Wannop

□ **FREE PRIZE DRAW** Check the membership numbers shown below. If your number is included in the list, you've won a prize! To claim your prize, write to the P.O. Box. Please indicate your type of computer, as some prizes are machine-specific. Any prizes which have not been claimed by 31st March will be re-drawn at the A.G.M. (11th April), for distribution amongst the attendees. Only current members are eligible. Committee members are not eligible.

2794 — 2630 — 886 — 1913 — 4064

October CrossNumber Solution

□ Winners of the October CrossNumber competition:-
M.D. Bass of South Croydon (membership no. 2972) won the Apple II prize of the Carmen SanDiego trio.

A.J. Robinson of London (membership no. 1224) won the Apple IIGS prize of the Pyware MusicWriter.

Terry Cymbalisty of Leeds (membership no. 1166) won Tesseract for the Mac.

□ Several people pointed out that there were a number of possible answers for 9 down although in fact everyone sent in the answer that was intended. More to the point, there was an error in the diagram where a square was left as white when it should have been black! We apologise for these errors. Due to the poor response to the competitions, we have decided to discontinue them for the time being.



The Editorial team is:

Apple II Macintosh Reviews

Ewen Wannop

Norah Arnold, Irene Flaxman

Elizabeth Littlewood

Many thanks to all those who work behind the scenes and who receive no personal credit. These people are the stalwarts of Apple2000.

Additional thanks go to Val Evans for designing our front cover, and to Walter Lewis of Old Roan Press (051-227-4818) for our printing service.

Apple2000 are Founder Members and
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Letter Box

Malaga
Spain
via TABBS



Dear Ewen,

I have found more problems in the last months than in all my previous experience with the Apple. As I have told you, I bought a II GS colour monitor from Bidmuthin, but I have found that a lot of programs do not work with the combination of AE ColorLink-GS and the colour Monitor, not only games but even some Beagle Bros software (such as Beagle Graphics). I have posted messages on AppleNet and I have also sent a request for help to Beagle Bros and to Applied Engineering, with no answer. I have also sent a fax about it to Bidmuthin, but they say they can't help. I've also seen the fact you mentioned in the last number of Apple2000 about the fall of advertising (Where has MGA SoftCat gone?).

The last Bidmuthin bulletin I received tells the readers that Bidmuthin will begin to sell only Mac and MS-DOS clones. I have received a Fax from Steve Morrisby telling me that "we will continue to sell Apple II products to existing customers, but we will not take on any new Apple II ones. Also we won't be carrying stock, but will be able to obtain items for you". I do actually understand that there are strong business reasons to follow the Mac & MS-DOS path, but in any case the real effect for all us Apple II users is that we are even more orphans than ever before. And what about the USA? Well, the last order we received from Programs Plus contained some items that were already used, lacking even the disks that should be included with the cards we bought. The 8 mhz Zip Chip didn't work (I'm speaking of the MARCH! this year). We returned it for replacing and we have just received it (Yes, NOVEMBER, and after a lot of Faxes asking for it). I think we could say the same things about A2-Central (Note the crash of 8/16 magazine).

I'm beginning to be a bit uncomfortable with an Apple //e. Sure, the machine still runs fine, our ProLine system works so well that some users do not think it is running on an Apple //. But I'm tired of all the efforts I must make to get the hardware and software I'm looking for. My main interests in computing, besides the work I do at the university, are languages and 2D-3D graphics (Well, I also look for some games for my son). When speaking of "languages" I don't mean "commercial" programming, but only the interest on the new trends in computing (Graphics based Pascal and C, OOP, Artificial Intelligence languages, and so on). Until now I have been comfortable with Apple Pascal and other CP/M based traditional languages, such as Fortran or Cobol. However, I have been searching for better tools to program the //e and I've found that there is NOTHING to really do this. The only language which uses the graphic interface is MICOL Basic, and I'm not sure

about their real level of quality.

I still have some options. I can continue looking for the few items we can still get. Maybe I could even get a PC-Transporter card, to "upgrade" in some way my //e, but... could I use all the MS-DOS based languages such as Turbo Pascal 5.x and 6.x, C++, and all the rest with this card? If so, it would be a good solution, because the Transporter is getting very cheap these days, and I could continue still using all the software I have for the //e.

I have even thought of getting a II GS (only a CPU, given that I already have a colour monitor and 3.5 drive). In this case, what memory should I have? Where should I buy it? By using a II GS I could keep using much of the stuff I actually have, and there are a lot of products (more recent programming languages) for the II GS. However, it seems that the same problem will happen again after some time and I then will be left with two outdated machines...

I must say that I do not like the idea of having a MS-DOS machine. I have lots of shelves full of Apple II related stuff (not only hardware and software but books, magazines etc.) and I wouldn't like to begin getting more stuff for another fully diverse machine. However it seems the best way (Sorry, I know you don't like MS-DOS machines!).

And as for a Mac? NO thanks. Apple has a very odd idea of what should be their support to customers, and even if I use Macs at work, I can't buy a new machine each year for my own use. Here in Spain, all we old Apple users have a lot of negative experience with Apple's marketing. They make great machines, but all stops there. If you have a problem, Apple's support is reduced to "Oh, get our new machine and all will be solved".

Sure, in the MS-DOS world there are also new machines and there also are some compatibility problems, but all in all, it is anyway much more stable than the Mac one. All the main packages run on all machines, from old PC to 386's. You can get more power and speed if you like, but you are not forced to buy a new machine. However, in the Mac world, you can actually find the following scenario: a user owns a Mac ZZ, dated two years ago. He now needs to use the program AAA. Well, he can buy it. But now he finds that AAA is made only to work with version 99.x of System software. Sure, he can actually upgrade to such a version, but he needs also a memory-drive-chip upgrade. Oh, well,... Finally, our user will find that all his software he bought two years ago does not run with the new "upgrades". And as for the software's developers? Sorry, they are out of business... This is not a Sci-Fi story. Some of our users have actually found such a case.

Apple's advertising speaks a lot of compatibility between all Mac applications. However it does not say that you get such compatibility at a given time, that is, the software produced at the present will run on nearly all Macs. What about a Mac only two or three years old?

For the "upgrade" way: I would include a Hewlett Packard Inkjet 500. Bidmuthin gave me a quotation of £499. However, I have seen on PCW some ads of mail order suppliers selling it for £299. It sounds a large difference. Are actually there reliable suppliers among those mail order vendors?

I would also consider getting Publish-it v4. I have seen that Programs Plus only sells version 3. What do you think about this program for the //e?

The programming languages question however remains the same. If I'm right, there actually are LISP, PROLOG and some others, but they are hard to get.

Well, I was writing a message and it's now become a long letter!

The question is: Ewen you have a lot of experience with all the three environments, so, please, what do you advise



me? (Maybe I will do better going for the lounge bar tonight...)

PS. Our BBS number is +34 52 132942. Note that it is near fully translated to Spanish.

José Accino

□ I think we have all got very depressed in the last few months with the way things are going in the Apple II world. Reading between the lines, this is clearly how A2-Central feel, and I also feel that way too. It is now clear now that Apple really do want to forget the Apple II ever existed even though they still make a lot of money from it. They have now missed the opportunity to introduce a new CPU and it seems are now going to support existing Apple II users only through system upgrades interspersed with a few bits of ancillary hardware and nothing else.

The dealers are also feeling the draught as you have noticed and are looking at other computers to make money with. I don't blame them. If Apple do not admit the Apple II exists (except for the IIgs prices tucked away at the back of their current price lists) then you cannot really blame them. ClockTower still supports the Apple II and MGA still support the Apple II, but they have been feeling the pinch and so have cut down on their advertising in the last few issues.

I am resigned to all of this now, but will do whatever I can to support existing users of the Apple II series. The Apple II computers that still survive are not going to go away and shall need support for some time to come.

I have always predicted that one day Apple will drop the Macintosh. With the new projects being undertaken under the Apple/IBM alliance, this day is not far off. I suspect the Macintosh world will then get exactly the same treatment we have had!

Meanwhile Apple2000 still supports ALL Apple computers and always will!

You have not been able to get some programs to work with the AE ColorLink-GS, I must have missed out that this device existed, but can only guess that it is the Double Hi-Res programs that do not display in colour. This was a problem with many of the RGB boards around a few years ago. There is no solution if that is the case other than to get

a IIgs CPU to run the monitor! If you do go the IIgs route then you should be able to get one from any Apple dealer, including Bidmuthin. The IIgs is still in the Apple price lists! There are some secondhand ones every so often in the magazine but they usually come with drives and monitor.

You would need to get at least the full 1.25 megabyte basic IIgs, but if you intend to programme with it then I would suggest at least 2 mb if not 4 mb. I found that I could not work easily with under 2 mb using the APW shell and have the Cirtech Primo card with 4 mb on board. An accelerator is a must for the IIgs, I use the TransWarp one, and have a computer that is as fast as my SE/30 sitting next to it and with as much memory!

A PC Transporter will of course work in the //e as well as the IIgs. It is a 756k XT clone using CGA colour graphics. As long as MS-DOS software will run in that environment, it all does actually work. Even comms programs using the serial ports. I use it to get material in and out of the Bulletin Board computer almost every day.

I agree with you about the policy Apple have over upgrading computers at such frequent intervals. Technology does not stand still and Apple are obliged to be at the leading edge. The computers do indeed get upgraded too fast. However, in the Macintosh world most users are 'power users' and will probably only use a few programs on their computers. They will not worry if the computer only last a year or so as they will wish to upgrade anyway. I am in this position at the college where I teach. Our first Macs were SE's. These are now too slow for our needs and with only 20mb drives have been relegated to word-processors. They seemed fine when we first got them, but the SE/30's we have replaced them with are so much faster. I now need another SE/30 and discover it has been made obsolete! I shall be trying some LC's and will see how we get on with them. However they will probably be obsolete by next year when a 69030 version appears.

The LC is a possible solution to your dilemma. With a //e board inside it you would be able to use your //e software and also have the full Mac environment at your fingertips. With a built in 40 mb hard drive and a SuperDrive, it is also cheaper than a IIgs. It will run the Soft PC program as well so you can have your MS-DOS machine that way! This is



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real heresy, Ewen recommending a Macintosh!

Publish-It v4 is an excellent program and it will support the LaserWriter. The IIgs still has problems with some of the 16 bit software and runs smoother with P8 material. I would always use P8 AppleWorks rather than the GS version, but then I can use the Mac when I need to for DTP. However IIgs programs support the DeskJet and DeskWriter, and with the new System 6.0 for the IIgs will support the StyleWriter. Hewlett-Packard have recently dropped the price of the DeskJet and especially the DeskWriter. This may explain the difference in prices you have seen. The DeskWriter should now be the same price as the StyleWriter with the colour version around twice that price. The only real difference between the DeskJet and the DeskWriter is the interface. The DeskJet is better for the //e and of course will work fine on the IIgs. The DeskWriter was designed for the Mac and will work on the IIgs using the Independence drivers from Seven Hills.

Finally, there is a reasonable choice of program languages for the IIgs. Most programmers either use assembly language under Merlin 16 or APW. Pascal and C are also available for the APW shell as well.

Ewen Wannop

Berkhamstead
Hertfordshire

Dear Apple2000,

I would like to use "Compuserve" and send and receive Fax direct from my Mac IIci using a separate BT line from my normal 'phone.

Can you recommend what to use hardware and software?

Trevor Nicholas

To join Compuserve you should ring 0800-289 378 and ask for a membership pack. Mention that you are an Apple2000 member and give them your membership number. You will need to purchase a copy of CIM (Compuserve Information Manager) software at the same time as joining. Although you can access Compuserve with standard comms software, CIM is recommended for ease and speed of access, it does not cost very much.

You would like to use your IIci for sending and receiving FAX. May I make a few observations.

Using a FAX machine of any sort requires a dedicated phone line or a voice detecting switch that can switch the phone line when a FAX modem connects. However to receive FAXes, it also requires a FAX machine or interface that is active all the time. Although there are many FAX cards and modems that have software that will run in the background on the IIci, it means that you must leave the computer on all the time. There is also an overhead in processor time while a FAX is being received, and if you have a crash during FAX reception you will lose the incoming FAX.

Sending FAXes are of course a different proposition and it means that you can use all the graphic interfaces of the Mac to process and generate FAX messages when sending from a Mac itself.

If all you want to do is send text FAXes then Compuserve will do this for you without having a FAX line. You will not of course be able to get any in return.

I personally feel that if you are going to send and receive many FAXes it is better to have a normal stand alone FAX machine. You can still send the output of your Mac, you would just have to print the document first.

There are a number of FAX modems for the Mac. Both external and internal. I have not got an exhaustive list and have had little feedback from members. I will publish this reply in the magazine and hope that we can get direct feedback from members who have used them on the Mac.

Ewen Wannop

Islington
London

Dear Apple2000,

I would like to ask about the PD Software library. When I scan through the disk catalogue, I discovered that there are some fonts called Laser fonts. Are they PostScript fonts or are they just screen display fonts?

Since I sometimes do graphic design to earn some extra money for my Mac, I need quite a lot of fonts but can't afford to buy.

If they are as good as PostScript fonts I would like to buy them all. Please tell me the disk number because I'm not quite sure which is PostScript and which is bit map display (on the old catalogue stack there is no file format display). I just want those that have PostScript output.

Then I can put down my PD software order from to get the Special Offer with other disks.

The other thing is I'm not sure whether I can receive E-Mail or not with my system. I tried to send this letter on TABBS mailbox but I failed. I'm a new user to modems, can you please give me the cure? Where do I upload or leave messages on TABBS?

Chi Yin Tsang (Andy)

Printing fonts get many names. Laser fonts, outline fonts, Postscript fonts are all the same thing. They should include not only the actual printing font but a second file with the screen font. You will find a few of printing fonts on TABBS. Beware though that the TABBS library entry for macintosh fonts are nearly all screen fonts. The laser fonts are found in the DTP library. I may well change all these libraries about in due course as I now have more storage on the system. Just keep watching!

I cannot easily point out all the disks which have printing fonts on them. You could try ringing the Mac Hotline and asking Norah Arnold which disks they are. She puts the Mac library together.

The TABBS E-Mail is specific to TABBS only. It does not go beyond there. Private E-Mail from the Mailbox option goes to the person you have sent it to only. Public mail in the other areas is seen by all unless you make it private. Your own modem at home will not receive E-Mail without setting up your own Bulletin Board system. The Fax option is quite different, though it means having a phone line dedicated to the Fax modem or having a Fax detector box that can ring your voice phone if no Fax tone is received.

Leaving messages on TABBS will depend on who you want to send it to. If it is a private message to one person only, go to Mailbox and Post it. If you want to leave a general question go to the correct area, Macintosh in your case, and post it to ALL. If you prepare a message in advance and send it, be aware of some constraints. TABBS takes all empty lines as the end of message entry. If there is something, even a space will do, the it will continue to accept data. It has to perform word wrap at the end of lines, so this may confuse the process. Use a space as the first character of a new paragraph to make sure it does issue a line break. It can be quite tricky sending prepared messages so experiment till you get it right.

Ewen Wannop



E-Mail
Via TABBS

Dear Ewen,

I've found a cheap source of *internal* SCSI drives for the MAC. They are Apple stickered and the one I bought, a Seagate 160MB, appears new. The suppliers, see below, claim they are sourced in the UK and offer a 90 day warranty. The prices are as follows.

20MB Miniscribe £80

40MB Quantum £120

80MB Quantum £180

160MB Seagate £325

The company offering these have been around for ages - they offered a hard drive kit for the BBC in 1988 - and usually supply and service HDs for IBM PC compatibles. They've been very helpful in the past when I had a BBC and turned up trumps when my internal HD went down about a month ago. It's buyer beware I suppose but I'm very satisfied and thought I'd pass this on.

Their name and address is:

Commonside
Unit 31
193 Garth Road
Morden
Surrey
SM4 4LZ

and their phone number: 081 330 7533

Other Mac BB's have been reluctant to post this as they sell HD's themselves. I do repeat 'buyer beware' but have to say that Apple's disk utilities have recognised my drive and I have had no problems with it over the last 4 weeks. Commonside reckoned to have even larger MAC SCSI drives soon when I got mine in October. They have 200 of the 80MB Quantums. If anyone is close to Morden how about checking them out?

David Evans

Bideford
North Devon

Dear Editor,

Despite the article in Sept 90 Apple Slices, I still haven't managed to get hold of the actual wiring and component changes required to cure my Mac IIcx of its problem. Readers may recall that the Mac declines to switch on until the power plug has been disconnected for more than about eight seconds and then reconnected. Sometimes it has taken ten minutes or more trying before the Mac can be brought into life, and this can be annoying and frustrating.

I put an enquiry a few days ago on the 'Mac new users and help' forum on CompuServe, and got two immediate replies.

The first reply, from the USA, said that if I found the cure, be sure to let him know, for he had a Mac with the same problem.

The second reply, also from the USA said why bother to switch the Mac off. He had had his Mac running nonstop for two years. However a Mac and ancillary gear takes around 350watts, and would cost some £150 a year to keep running continuously. Then there is the problem that my cat likes to lie on the Mac Monitor, so smothering the ventilation slots. She has learnt not to do it when I'm



Apple 2000

around, but the moment my back is turned she homes in on the centrally heated spot.

I am still waiting for someone to tell me the permanent cure.

I purchased a DeskWriter soon after they appeared on the UK market, and I read Ewen's admirable report on the machine with interest and admiration. He doesn't seem to have missed much, but, nevertheless, the printer does have some eccentricities which are revealed only after considerable use.

The quality of the print was in a different league to my previous ImageWriter 1, so that I could forgive H.P. some of the DeskWriter's idiosyncrasies.

It is important to riffle through the paper before putting it into the printer, for if two sheets stick together you will have the embarrassment of finding the first few lines printed on the lower sheet and the rest on the upper sheet. The paper feed is temperamental and if the top sheet isn't absolutely flat, with no dog eared corners, then the paper feed will fail and the Mac will report that the printer is out of paper. Printing both sides of the sheet can be a problem if the first side isn't pressed flat and completely dry. If the pile of paper is pushed tight against the inner stop, then the paper feed will probably fail. It's best to leave a millimetre gap.

The DeskWriter is limited to 50 A4 pages a day, which is a ridiculously low figure.

If you use the printer only for the sporadic letter and the occasional print-out, or if you have a benevolent employer eager to provide new ink cartridges at £15 a time, then the limitation of the printer to about 150 A4 sheets of mixed "best" and "faster" printing (H.P.'s own estimate) per ink cartridge will be no disadvantage, though the cartridges always run out just as your back is turned and you are printing the second side. That works out at 10p an A4 page, just for the ink. If, like me, the majority of your printing is in "best" mode, then you can expect to print less than 100 A4 sheets per cartridge, and that comes to 15p for an A4 page. To keep costs down to an acceptable level, you have to reload the cartridge - I found Skrip ink the best of those available from my local stationer - and the way to do it by injecting 10ml into the foam interior of the cartridge by your local junkie's syringe has been described several times in Apple 2000 and elsewhere. A cartridge will usually start to fail after a dozen or so refills.

I see that Ewen fell foul of the DeskWriter's insistence on TIFF images at 300 dpi or an exact submultiple of 300 dpi. Some of the Desk Top Publishing programs have the infuriating habit of shrinking images by about 5%, so that if you put a 300 dpi picture into them, you get a smaller 315 dpi image out, and the DeskWriter doesn't like it, and will insert a checkerboard pattern of lines as on p 47 of Ewen's article.

John Stanier



Hornchurch
Essex

Dear Ewen,

Having read with interest your article on the HP DeskWriter I wonder if you could offer me some advice regarding the use of an ink-jet printer with the Apple IIgs.

Is it best to use -

An HP DeskJet 500 with an Epson FX Emulation card, or a DeskWriter with Harmonie and PORT.BXY Driver Utility.

Does either set-up offer an advantage? The overall price is much the same but I can appreciate that the DeskWriter would be a better buy if I was ever planning to get a Mac.



I use AppleWorks 3.0 and PublishIt! 2.0. Will either of the above work with PublishIt!? I have been told that the DeskJet 500 with the FX card will print PublishIt! documents provided that they are mainly text.

Hopefully these are simple questions for you to answer.

Finally my thanks to you and all at Apple2000 for all you do. The magazines alone are worth the subscription although being a relative newcomer to computers a good deal of it is above my head.

Stephen J Raindale

□ I do not have direct experience of the DeskJet 500, but as far as I am aware the only real difference between it and the DeskWriter is in the input ports. On the DeskJet 500 I think there are both serial and parallel ports. If no serial port is available then you will indeed need the Epson card. If a serial port is available then you will be able to direct connect to the GS serial port.

The DeskWriter has a single mini-8 connector, but this can be used as either a direct connect port or an AppleTalk port. To direct connect on the IIgs you will need a standard IIgs/Mac to ImageWriter II cable. AppleTalk requires two LocalTalk kits, but as there are no AppleTalk drivers for the DeskWriter on the IIgs this is rather academic.

If you are thinking of getting a Mac at any stage the DeskWriter is obviously the better solution.

There are two methods of driving the DeskWriter. Harmonie as you mention and Independence from Seven Hills. Both as you point out need the high speed port driver PORT.BXY. I have used the Independence drivers in this combination and it works well from GS programs. They were originally written to drive the DeskJet 500 directly, but using the high speed serial driver are just as transparent.

Driving specialist printers from GS/OS is normally quite easy as all you need are the correct drivers installed. Driving them from ProDOS 8 is another matter altogether. There is usually no way to intercept the output from the program you are using and get it to the correct drivers. Both AppleWorks 3.0 and PublishIt! just do not have the right drivers within them to drive either the DeskJet or the DeskWriter.

As you have a IIgs, I would suggest taking the AppleWorks 3.0 files and printing them using a program like WriteAway. You will then be able to use the full range of fonts available to the IIgs. This route will not work with PublishIt! however as it just does not have the right drivers. You will need to badger the publishers to include drivers for the DeskJet or DeskWriter!

Ewen Wannop



BY EWEW
WANNOP
BASIC
CIRTECH
CIRTECH
CIRTECH

Dear Ewen,

In reply to the letter of D Martin of East Ogwell, Newton Abbot which is in the Apple2000 of October 91 Vol 6(5) page 6 lower left:

Payroll] is written in Basic, and is copy protected. I have removed the protection and have recoded the National Insurance parts (but not the 'contracted out' options) to accommodate the current NI algorithm. If you would kindly pass on my address to D Martin I should be able to help him.

There have been many comments recently in both Apple2000 and A+ regarding moving data to/from MS-DOS

platforms. I have a copy of CrossWorks and find this an excellent piece of kit. The user interface on both the Apple and the MS-DOS ends are of the AppleWorks style, though not so smooth. Data is transferred rapidly via the serial port at 19k baud using the built in //gs and //c ports, or a Super Serial Card (others are supported) using the supplied lead which has three types of Apple serial plugs on one end, and the two types of XT/AT plugs on the other. Not only is the data transferred, but it may also be 'translated' from AppleWorks to the more common MS-DOS packages (Works2, Lotus123, WordPerfect5, DBase3). Most other MS-DOS packages read/write these common formats, making a long list of packages than can interchange data with AppleWorks. Occasionally the transfer hangs inexplicably, but when it does it is easy to escape from the situation and re-start. I find the package very convenient in that I can set up a document/spread sheet/data base on the friendly, quick AppleWorks 3, and when it is working, ship it across to MS-DOS to be tuned up on the customer's chosen package - the only danger has been when the Apple (with 1 or 2 usable meg) swamps the 640k MS-DOS limit.

I am told by Nigel Bradley that another, similar package exists for use with the PC-Transporter.

CrossWorks is rather expensive; mine cost £100, so if members want discs translated, then I could provide a service at £5 a disc (all media to be supplied).

Dave Sewart

□ There is always more than one way to crack a nut when computers are involved. The advantage of CrossWorks is of course the built in translators. A comms program at both ends would do the other part of the process just as well though you would have to get the cable.

The PC Transporter comes with a program to translate from ProDOS to MS-DOS, but does not include any other form of translation. If anyone can tell us the name and supplier of the translator that Nigel refers to we will publish that information.

Apple File Exchange on the Mac performs these kind of translations when you copy between MS-DOS the Mac or ProDOS.

Ewen Wannop

Ashton
Chester



Dear Editor,

I would very much appreciate any assistance you could give me with regard to a data transfer problem. I have a substantial number of floppy disks carrying text files generated by Wordstar version 3.3 under CP/M on an Apple //e. The problem is that I need to get these files onto an IBM PC compatible machine and be able to edit them once they have been moved. Do you know of any combination of hardware and software which will enable me to carry out both the transfer from Apple to IBM and retrieval of the data into a usable format on the latter machine.

At present I have a couple of //e's with floppy drives and a Cirtech PlusDISK, a Tandon 286 and a Tulip 386SX. I also have a Racal Milgo Maxam IV modem running off the Tandon and an old Pace Nightingale modem with a Mastercard which I have used with the Apple.

I know that one can get a PC Emulator to work with a Macintosh and I believe there is one for the Apple IIgs, but is there an Apple emulator which one can put in a PC, as this might solve the first problem. I would be grateful for any info and any source for the equipment required. Inciden-



tally, I still have most of my Apple 2000 mags over the last three years so if this topic has been covered, and you can recall the issue, perhaps you could let me know. I've not come across anything myself.

Richard Holland

PS I hope that some of the advertisers in Apple 2000 who seem to have dropped away recently will eventually return. There have been a number of occasions in the past when I have located and item via this source, and, of course, the magazine needs the revenue.

□ There is no Apple II emulator for the PC that I know of, and certainly I would suspect that it would not support CP/M even if there was one. There are though various routes that will allow you to transfer the data from the CP/M disks to the PC. However there is one step that you may have to take first before you can transfer the files into the PC environment. This will be to copy the files from CP/M to the more Apple II friendly environment of DOS 3.3 or ProDOS. If you do not have such a utility then Chameleon from our Special Release software library will do the trick.

A PC transporter will certainly translate the files for you, but at a hefty price. It can transfer from ProDOS disks to standard 5.25 PC disks with ease.

There is also SoftLink which is a hardware software package and will connect the two together and send the files to each other, and of course CrossWorks referred to in the previous letter.

As you already have a modem and a serial port at each end, this will be the easiest way for you to transfer the files. If you are prepared to make up a null modem cable to connect between the two serial ports then you can dispense with the modems and simply connect the two together using a piece of cable. You then use a comms program at each end to transfer the files to each other using a file protocol such as Xmodem. If you do not have a CP/M comms program you will first need to transfer the files to whatever operating system your comms program uses, with Chameleon. If you have a Nightingale Mastercard combination this will probably be DOS 3.3 under Data Highway.

If you do not want to make up a cable, you can sometimes plug one of the modem phone leads into the spare socket on the back of the other modem and connect the two that way. This does not always work however. You will be limited to a maximum of 1200 baud using the Nightingale in this way.

We have covered similar topics in the magazine, though I am not sure of page numbers offhand. I hope this letter gives you some pointers as to how you will solve your problem.

Ewen Wannop

Glasburn
North Yorks

Dear Sir,

I heard of your group through Roger D'Arcy computers, and hopefully we can help each other eventually, but most probably you can help me more initially.

I was able to purchase an Apple //e (at very low cost) complete with:-

Monitor (monochrome)

2 disc drives and card

1 printer card

80 column card

Model 7710 asynchronous serial interface and manual
Graphics tablet (minus a couple of leads) and manual



Floppy discs: Apple presents, AppleWriter II (master), AppleWriter II (tutor), DOS 3.3 system master, ProDOS users disk, 5 unused disks.

Manuals: Apple II, The Dos Manual, A touch of AppleSoft basic, AppleSoft Basic programmers reference Vol 1 & Vol II.

The person who sold this said that it was outmoded and that no one provided any software etc. for it and the most I could make of it was a word processor! I must explain that I know absolutely nothing about computers, but thought that the £20 this cost was worth it to learn a little about them and it wasn't a lot of money to lose if things didn't work out.

What I am interested in is learning how to use this equipment and eventually putting it to some use. I haven't started into the books too much yet so I'll see how I go on with them. One of the things I would like to do is translate German - English and English - German. I have dozens (1000's probably) of cuttings from German newspapers and magazines. Concerning one of my interests, when they are translated I would want to have a printed copy to keep, is there such a program available? If not could one be made?

I also think a couple of easy exciting games would help me with familiarising myself with the computer.

I don't know how the group (Apple 2000) works but presumably you pool anything or loan it to people needing it etc. within the group. I am prepared to do this or buy such things as games, software which I need etc.

Well now you know about me and my aims etc. I will be pleased to hear from you, and get to know about your group.

John Place

□ I am sure we can help each other. You have captured the spirit of Apple 2000 in a nutshell!

The //e is certainly not outmoded. It is still being manufactured and sold in the States, though Apple UK will not tell you that. It does make a good word processor, but with a wealth of software available for it and more being written all the time, it is still very much alive!

There are several places in the UK, as you will see from the advertisements in the magazine, that still support the II series. Of course Apple 2000 supports ALL Apple computers.

Your price of £20 is a real bargain. The usual price is nearer ten times that. You will find of course that adding to the system will cost considerably more than your starting price.

How we work as a group is to be a focal point for exchanging information. This is done through the pages of the magazine, the telephone and the Bulletin Board. We do hold extensive libraries of Public Domain and Shareware software, and sell copies of these disks at a nominal price. However these disks are mainly utilities and not full feature programs. The copyright law rightly forbids us in the UK of copying commercial software. This is normally available from a dealer such as ClockTower in London.

Your main interest is in translation I see. There are no programs that I am aware of, even for large mainframe computers, that can successfully translate one language into another. It would be possible to translate a word at a time, but not the meaning of sentences. This is just one of the things that computers have not yet learned to do as it takes far too much processing time and memory. It would be almost an impossible task, certainly on the //e to write a program to do it. A dictionary can do the word translation job just as well!

I can see however that a word processor and printer would help you considerably in this task though. You have a copy of AppleWriter, though you do not say which version you have. If you do not have the ProDOS //e version then I



would suggest either getting that one, or getting a copy of AppleWorks 2.1. AppleWorks has the advantage that you can bolt on extras such as spelling checkers. I have not seen a German dictionary for these modules but I would presume one existed.

You will also need a printer. As you have a serial card you ought to look for an Apple ImageWriter printer. These are compatible with most programs on the //e. Alternatively you could get a parallel printer and there are lots of those about on the open market.

We have just updated our library catalogue disk. If you ask for the library IIe catalogue disk you will get the right one for you. The disk costs £2 including P&P and VAT. In the catalogue you will see a large range of disks of different types. There are some games on the Xtras 5.25 disks that might interest you. Please note that these disks require a copy of ShrinkIt to unpack some of the files. The Xtras scheme is normally linked to the magazine and so full descriptions are given in the magazine of what is on the disks. I would suggest perhaps getting disks Xtras.P8.No.11, Xtras.P8.No.8 and PR025. You will need to use the UnShrink program on PR025 to unshrink the SHRINK program on Xtras.P8.No.11 to unshrink any .SDK files such as the one on Xtras.P8.No.8. Also on Xtras.P8.No.8 are some other games. All the disks have a variety of programs that will help you understand how the //e works.

There is no easy way to learn how to use the //e, though the Apple][User's Guide for Apple][Plus and Apple //e may help. We also sell that book, order code 007 881176 7.

The Editor

Whitstable
Kent

Dear Apple2000,

I have recently bought an Apple II Europlus and an Apple //c, however I am in need of advice.

Could you please tell me how I can get these machines to display on my TV as I cannot afford to buy a monitor.

I am also very interested to know what kind of support you offer in the way of spares, add ons and software (I also need manuals).

J Dorza

□ We ourselves do not supply spare parts and 'addons' for the Apple II series. We do sell Public Domain and Shareware software but not full blown software packages. We support the dealers who still do sell these things. You could try Clock Tower in London or one of the other dealers. Details of these dealers, and other advertisers, can be found in our magazine.

You will probably find the //c is the most useful of the two computers. It is still being manufactured and software is still being written for it.

Monitors are not expensive for monochrome ones. Almost any monochrome monitor will do and you should be able to pick one up for about £10-20. Colour is a different matter. Both the II EuroPlus and the //c output NTSC line video. This is the US standard and will not by itself generate colour on UK televisions. You can get PAL encoder cards secondhand for the II+. This will give you not only PAL colour but an RF signal that will go into a television. The picture quality is not too good however. The //c originally came with a small odd shaped device in white plastic that hooked on the back of the //c and gave a PAL RF colour composite signal that would drive a television directly. You might be able to get one of these adaptors secondhand.

Otherwise it would be difficult to drive a television directly. Both computers however can indirectly drive a television in black and white only by connecting the phono video socket on the back to the line input socket of a video recorder. You can then use the video recorder to drive the television at RF level.

The Editor

1.2 Home Computer
Theory
Technical Information
CD ROM



Dear Editor,

Although this is my first year of membership, I bought my //e system back in early 1983 (for a lot of shekels). My system comprises of a //e with an extended 80-col card, 2 disk J's, parallel printer card, green screen monitor and a Juki 6100 daisywheel printer. I use it mainly for WP and record-keeping.

Firstly, referring to Lorin Enav's article in the August magazine, I decided to compare numbers, only to find them different. The chips are also in different locations. The motherboard photograph shown in the //e Technical Reference Manual also bears little resemblance to my //e. My motherboard has slot 0 in the centre and a colour killer switch on the right-hand side. Anyway back to the article:

1. The start-up screen display is; 'Apple]['
2. White screen-printed at back left corner; Apple IIe; P.A.L. c1982
3. Behind slots 3, 4 & 5 in solder; APPLE COMPUTER; 820-0073-B c1982
4. Location E2: 341-0135 CD ROM (printed); 342-0135-A (1982) fitted
4. Location E5: 341-0134 EF ROM (printed); 342-0134-A (1982) fitted
6. Location E9: 341-016x VIDEO ROM (printed); 342-0160-A fitted

As you can see, the numbers are different to the article and Mike Bass' letter in the October mag. Also, I don't know whether my //e can be enhanced.

Secondly, from the //e Tech. Ref. Manual, the video output, apparently, is a modified form of the NTSC system and not PAL. Here is a tip for anyone who begrudges paying the exotic price for a TV modulator and owns a video recorder. Locate the recorder VIDEO IN socket and plug into this, ensuring that you turn the videos' tuner section off. See your videos' operating instructions. This will work with any computer that outputs composite video signal of roughly 1-volt peak to peak.

Thirdly, I can possibly help G Elliott of Cleveland (letter June), with a copy of the Quick File // Samples disk and original book from the Product Training Pack. So, if he or she would like to contact me if the above is suitable. You can print my name and address.

As I too have 'time on my hands', due to my 'enforced retirement' from ill-health, I would be also be willing to copy (using AppleWriter //) relevant Apple][items as suggested by Harold Bennett.

One last query. In the August 1991 magazine there is a list titled 'APPLE II INFORMATION SOURCE'. Does this list imply that copies of the articles etc. can be obtained from Peter Davis?

Keep up the good work!
Robert T Smith



□ I apologise once again for the misleading article on the //e version numbers that we published. I explained all in the December 1991 letters pages of the Apple2000 magazine. From the numbers you quote you will see that you have a standard //e board. You will certainly be able to 'enhance' your //e, but will need to get hold of the chips to do so. The three ROMS, CD, EF and VIDEO, can be replaced with standard 64k EPROMs copied from a genuine //e enhanced set. To complete the enhancement the 6502 processor must be replaced with a Rockwell R65C02 chip.

You may be able to commercially get hold of an enhancement kit, but as Apple UK do not support the Apple II series any more, this may be difficult to find. The EPROMs are of course copyright by Apple and so should in theory not be copied. The R65C02 is easily obtained from many electronic suppliers as are blank 64k EPROMs.

I think an important point is being raised here, and one that you raise in your offer of a copy of the Quick File Samples disk. There is much in the way of hardware and software that is still required by users of Apple II computers. Much of this is now unobtainable. The //e enhancement kit is a case in point. If you did manage to find a kit, it is possible that this has been copied itself and is not original. In the same way that we now copy and supply Apple II System Software as it is not obtainable through a proper route, I think it is in order to copy the Apple //e EPROMs for personal use only. If you are in doubt about it, write to Apple and see what they say. We write to the Apple legal department and told them we are distributing Apple II System Disks. They did not reply.

Other software which is known to be unobtainable, or the publisher no longer exists, can I feel be copied and passed on if it is to replace a damaged or lost original. It should not of course be copied for any other reason.

The output of your //e is certainly PAL video and suitable for UK colour TVs. The P.A.L. on your motherboard indicates that. They did not publish a Tech. Ref. Manual for the UK version hence the reference to NISC colour.

The list of articles by Peter Davis was only a reference to those he had collated himself. He is unable to provide copies I am afraid. However as Apple2000 is unable to reprint old magazines, and we do not hold stocks of them (our garages are full of Apple2000 material as it is!), it is perfectly in order to photo-copy from any of our own publications.

Ewen Wannop

Newcastle-u-Lyme
Staffs

Dear Ewen,

First may I thank you and your colleagues on the committee, together with the regular authors of articles and the other volunteers for the work they put in to run this club. Up to now I have been a lonely Apple, but things would have been much more difficult without your efforts. Unfortunately I have no special expertise to offer.

I have been a member since 1983 following the purchase of a //e. In April 1989 I acquired an ex-Tachograph IIgs for £300 (incl. VAT) and little by little I have built up my system. Part of that process of improvement involved buying a Cirtech PlusRam GS8 card with 1mb (from A2000). One year later the Primo card was available (at a lower price) and the new phrase 'DMA compatibility' was introduced. I first had experience of this trying to use my new hard disk with the new Apple SCSI card early this year!

I decided to phone those nice people at Cirtech for a chat about DMA; they soon replied with a diagram showing how

to adapt the PlusRam card to make it DMA compatible, without the expense of a new card. Since my last serious electronic soldering was as a Royal Navy Radar Mechanic in the 1940's I did not tackle it. For £10 + VAT + P&P they made the modification. I had an extra 1mb at the same time; who knows, with System 6.0 and HyperStudio 3.0 (my 2.1b arrived last week) round the corner it may be essential. I considered the information worth passing on because I have not seen it in print and there must be many with the older memory cards.

Bill Ruston

Barrow-in-Furness
Cumbria



Dear Sirs,

Having acquired AppleWorks 3.0 some time ago, I find that I cannot set my printer up for word processing. I can manage the Database and Spreadsheet but as for the word processing side I am at a complete loss.

I would be grateful if some help could be forthcoming. The printer I use is a CPA 80 [P] and try as I may I am not able to set the printer up to give me what I require.

My set-up is an Apple //e, twin 5.25 drives, 1mb card and CPA 80[P] printer and Grappler card.

Any help would be appreciated.

ME! I'm 68yrs+ not educated in the finer arts of computing, though I know that $12 \times 12 = 144$ so the old grey matter is easily confused.

I do notice that there is very little pertaining to AppleWorks 3.0 in the magazine these days.

Still I hope that I can be given a 'walking stick' to help me on my way.

G Philipson

□ You do not explain precisely what your problems are. I assume that you are not getting condensed and expanded text when this has been selected and that AppleWorks is only printing standard sized text.

AppleWorks is orientated round the ImageWriter printer and any printers that do not accept those control codes will need to be installed as custom printers. I do not know the CPA 80 printer so do not know exactly what it requires.

If you refer to the section on installing a custom printer on page A-6 of your AppleWorks reference manual you will see how to install a custom printer into AppleWorks. If you cannot see one which corresponds to your CPA 80 (refer to its manual for compatibility), then choose 'custom printer'. Pages A-8 to A-9 then explain how to tell AppleWorks about the codes needed by your printer to print the various styles of text. You will need to refer to your printer manual for the actual codes required.

Articles in the magazine are contributed by members. Nobody seems to be writing about AppleWorks 3.0 at the moment. Can anyone oblige?

Ewen Wannop

□ If you have an urgent problem you should ring the Hotline to get help. Letters and Fax submitted to Apple2000 will normally be dealt with as part of the editorial content of the next magazine. We shall endeavour to answer problems if at all possible before publication, but due to the large volume of letters received this may not be possible in all circumstances. Please submit all letters and articles to the magazine on disk wherever possible. The disks will be returned to you when the magazine is published. The publication deadline is the beginning of the preceding month to publication. If you have a modem, send us letters, articles and Public Domain programs to the Sysop on TABBS

Compuserve

□ Please send us your ID's either to the Apple2000 ID 76004,3333 or to the PO Box in Liverpool or of course to the Sysop of TABBS (see page 10 for address).

Apple2000	76004,3333
John Beattie	100012,360
Peter Bell	100010,404
David Collins	100016,3060
Ken Dawson	100016,2275
Michael Dawson	100015,2232
Gary Doades	100016,2353
Felim Doyle	100016,1151
Greg Elkin	100023,616
David Evans	100014,1161
Matcen Greenaway	100016,602
Alastair Greenstreet	100010,742
Dale James	100016,1152
Bryn Jones	71307,1457
Mark Hooper	100014,374
Jihad Jaafar	100016,526
Richard Kelly	100029,177
Peter Kemp	100016,1172
Andy Letchford	100016,1771
Elizabeth Littlewood	100016,401
John Maltby	100014,2216
Mark O'Neill	100016,476
Steve Perry	100013,365
Jeremy Quinn	100016,560
John Richey	100016,1037
Russell Ridout	72007,211
Arthur Robinson	73457,3614
John Stanier	100010,2611
James Southward	73767,1336
Ahmet Turkistanli	100016,3365
Donald Walker	100015,256
Andreas Wennborg	100012,342
James Walker	100013,142
Ewen Wannop	76224,211
Brian Williams	100016,2735

AppleLink

□ Send us your AppleLink ID's to the Apple2000 box.

Apple2000	BASUG.1
Cumbrian Computers	CUMP.COMP
Herts User Group	NA.HERTSUG
Liverpool Group	LIVERPOOL.UG

Radio Hams

□ We now have more call signs!

Trevor Baker	- G4CLE
Mike Bass	- G3OJE
Harold Bennet	- G4LPV
Ian Bryden	- G0PMZ
Jim Danby	- GZ0VM
(Packet Radio Mbox)	- GB7FCI
Michael Foy	- G7KOD
Andy Harrington	- G1XLW
(Packet Radio Mbox)	- GB7SUT
Rev John Lincoln	- GM0JOL
Tony Gatrell	- G4SVB
Arthur Owen	- G2FUD
John Stanier	- G3APU

Help Lines

□ Members having offered specialist help facilities are listed below:

Alan Armstrong (Apple II+, IIgs)

Ken Dawson (TimeOut, ProSel)

Dave Edmundson (A/UX)

Michael Foy (Amateur Radio)

A.W. Harmer (Mac)

Leonard Horthy (4th Dimension)

John Richey (AppleWorks)

A2-Central

A2-Central magazine	\$34
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GS+

□ GS+ the magazine for software developers is published by EGO Systems. This magazine is published bi-monthly and is now the only magazine devoted to programming on the Apple IIgs now that 8/16-Central has ceased to be.

Contact:

EGO Systems
PO Box 15366
Chattanooga
TN 374150366

□ They do accept credit cards as far as we are aware. Subscription cost unknown at the time of writing.

A+

□ The A+ magazine is published every month and costs \$82.97 for one year.

Contact:

inCider/A+
PO Box 50358
Boulder
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Contacts

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Bristol
BS99 1YN
0800-289 378 or 0272-255111

□ Mention you are an Apple2000 member. If you are a Macintosh user then order a copy of Compuserve Information Manager at the same time.

Genie

□ CompuServe is the biggest online system that interests Apple users. It has many areas within MAUG of specific interest to us. However, there is another online system in the States that has special areas for Apple users. Genie is a branch of the General Electric company and the online service is now available for UK users. The GE Services network that is used from the UK is in fact the one also used by AppleLink.

Online charges to Genie are charged in two price bands. Peak periods (Mon-Fri 8 am to 6 pm Eastern Standard Time) are charged at \$20 and offpeak (all other times) at \$8. The offpeak charge is therefore cheaper than CompuServe.

These however are the online charges only. You have to access Genie in the first place. So far they have not installed a similar access to CompuServe so it will be necessary to have your own PSS or DialPlus account and call the NUA '334219601282'. This is a UK NUA so only the £1.65 an hour PSS charge will apply. The total charges for Genie therefore work out at around £7.06 an hour offpeak.

Enter XJM11797,CENTRAL at the U# prompt when you reach Genie and follow instructions.

To obtain a DialPlus account contact:

British Telecom
Customer Service
Managed Network Services
St. Andrews House
Portland Street
Manchester
M60 1BT

See you all online!



AppleXtras

Xtras.P8.No.13

Side One

T BIN1.BXY	LIB	2176
T ADOC.SHK	LIB	56019
T LIST024.BXY	LIB	74496

Side Two

T EAMON.GMH.SHK	LIB	51149
T Eamon.194.SHK	LIB	58213
T TRANSMOG.SHK	LIB	14000
T MASSCHAN.SHK	LIB	8751

Xtras.GS.No.13

Desk.Accs	DIR > 1	512
1 Calcul.BXY	LIB	46080
1 QMount.BXY	LIB	9472
1 CPUuse.BXY	LIB	3328
1 Calendar.SHK	LIB	16677
1 ShutDown.SHK	LIB	4718
MENUTIME	DIR > 2	512
2 MENUTIME.DOCS	TXT	1028
2 MenuTime	STR	459
Programs	DIR = 4	512
4 NIGHTSKY.GS.SHK	LIB	204043
4 UtLaunch.BXY	LIB	201472
4 CLOCK.GS.SHK	LIB	11715
4 Apple.Bowl	S16	19231
Graphics	DIR = 5	512
5 SupVW22.SHK	LIB	65096
5 SUPERMAGIC.BXY	LIB	108160
5 Old.Master.3200	BIN	38400

□ It has been apparent from recent library sales that there is a growing need for material on 5.25 inch disk format.

We therefore have expanded the Xtras P8 disk to two sides. Twice the material for the same price! Just flip the disk for the extra programs.

As there is not too much new material appearing for P8 these days we may have to use older material if necessary in the future. We shall endeavour to make sure all included material is new to the Apple II library.

The Editor

/XTRAS.P8.NO.13/

□ Use ShrinkIt to unpack .SHK and .BXY files.

BIN1.BXY

A small utility in two parts to allow lower case input under DOS 3.3. The Installer ROM.ENH.V0.1.R.I is run to install the code for use. It will then clean up any line input containing lower case before the command is executed. Complete with Merlin source code.

ADOC.SHK

A-DOC is an AppleSoft Program Documenter. It will cross reference all the variables and other statements and ask you to enter an explanation. You can then print the result for reference or save for later use. The files must be run from a disk called ADOC.

LIST024.BXY

Version 2.4 of the excellent LIST file viewing and printing utility.

EAMON.GMH.SHK

This is the ProDOS version of the Eamon Games Master program disk. The DOS 3.3 version is in our II disk library.

Eamon.194.SHK

This file unpacks to create an adventure game to use with the Eamon Games Master disk. The Attack of the Kretons is one of the many Eamon adventure games available.

TRANSMOG.SHK

This is a "cellular automaton" from Glen Bredon. Something like the Game of Life.

MASSCHAN.SHK

This little program changes file types by directory. You can either Change All or Change From. It is useful for such things as changing the Font types for use with PublishIt!

/XTRAS.GS.NO.13/

Calcul.BXY

A full featured scientific calculator in an NDA. The calculator is based on the Texas Instruments TI-35 scientific calculator and it uses the SANE toolkit for extra accuracy.

QMount.BXY

QuickMount speeds up the mounting of a file server hard disk. When run it will mount a designated hard disk on the network. This little utility is from Apple and was written for System 6.0.

CPUuse.BXY

Gives a thermometer bar graphic display of how busy the CPU currently is.

Calendar.BXY

A Calendar with a difference. Unpack and place the Icon in your Icons folder. Now restart the Finder and open the Calendar folder. You must use System 5.0.x for this. See if you can work out how it is done. A long standing Apple2000 member contributed this little utility.

ShutDown.SHK

Have you ever shutdown and forgotten you had important data in your /RAM disk? Never again! This little reminder will let you know before that fatal moment!

MenuTime

A small Startup file that places a clock at the far right of your Menu bar. Instructions in the MENUTIME.DOCS file.

NIGHTSKY.SHK

See where the planets are from anywhere in the world. Input your latitude and longitude and a display of the night sky will be drawn. You can then print the screen if you wish. You can also zoom in to any part of the sky and see the stars in close up.

A powerful and impressive program.

UtLaunch.BXY

UtilityLaunch is an alternative programmable program launcher. You can launch by large icons or by a menu of buttons. Full instructions are given.

CLOCK.GS.SHK

A fun full screen analog clock for the IIgs. Run it when you are tired of playing Arkanoids!

Apple.Bowl

Improve your throw at the Ten Pin Bowl! A high-res representation of a three lane bowling alley from Apple.

SupVW22.SHK

SuperView Version 2.2. SuperView will view not only most picture formats but also PaintWorks animated pictures and 3200 pictures. An example of both animation and a 3200 picture is included. Use SuperView to view the last file on the disk.

SUPERMAGIC.BXY

Super Magic 320 is a set of assembly language routines for designing demo or arcade games. The ORCA/M assembler or APW is required to assemble the routines for your own use. A demo program is included to show you what the routines are capable of.

Old.Master.3200

A tasteful 3200 picture of three unclothed ladies to grace your screen.

Hotline News



Applesoft Print-using routine

From the questions received on the Hot-Line there are still many Applesoft BASIC users around. This is almost certainly because Applesoft is free, in the ROM, of all Apple // computers from the Apple][plus onwards. This is compounded by many new users of Apple // computers who are buying them cheaply through auctions etc. Many programmers spurn BASIC, but for writing simple text based programs its ease of use and the speed at which programs can be written is difficult to beat.

Presented here is a simple Print-Using routine that works with normal Applesoft and with the Beagle Compiler. To use it you need to make sure that you have set the string ZE\$ = "0000000000". Also ensure that you have a string of spaces which is SPS = " ". You should call the routine with the number you wish to format in the variable NU and the format in FM\$. You will then get the answer in NU\$ which you could print at a later time. Note that FM\$ should consist of 999999s with the decimal point in the correct place. For instance if you wished to format .000789 as NNN.DDDD you would set FM\$ = "999.9999" and would get the answer as '0.0008'. The answer is in quotes to show the two spaces you get.

```

5 ZE$ = "000000000000"
: SPS = " "
1600 REM "==== Print Using routine :FM$=
formatter EG "999.99" = NNN.DD ETC.
1606 LN% = LEN (FM$)
1612 LD% = LN% - LEN (STR$ (INT (VAL
(FM$))))
1618 LD% = LD% - (LD% > 0)
1624 LD = 10 ^ LD%
1630 N9 = INT (NU * LD + .5)
: NU$ = STR$ (ABS (N9))
1632 ON LD% = 0 GOTO 1642
1634 M = LD% + 1
: IF LEN (NU$) < M THEN NU$ = RIGHTS$
(ZE$ + NU$, M)
1636 IF N9 < 0 THEN NU$ = "-" + NU$ 
1638 M = LEN (NU$) - LD%
: NU$ = MID$ (NU$, 1, M) + "." + RIGHTS$
(NU$, LD%)
1642 IF LEN (NU$) > LN% THEN NU$ = LEFT$(
"#####", LN%)
: GOTO 2
1644 NU$ = RIGHTS$ (SPS + NU$, LN%)
1654 RETURN
1690 GOSUB 1600:NU$ = " " + NU$ + " "
: RETURN
: REM === +VE ===
1691 GOSUB 1600:NU$ = "(" + NU$ + ")"
: RETURN
: REM === -VE ===

```



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Cirtech plusRAM GS8

Bill Ruston of Newcastle under Lyme contacted me recently regarding some help he had received from Cirtech (UK) Ltd. You will see his letter in the letters pages of this issue. Bill had an Apple IIgs with a plusRAM GS8 memory card and wanted to use an Apple DMA SCSI card to talk to his hard disk.

Unfortunately the plusRAM GS8 like many other of the third party extended memory cards was not DMA compatible. John Robertson of Cirtech supplied Bill with a description of how, with a few resistors and a soldering iron, he could make his plusRAM GS8 DMA compatible or he could send it to Cirtech to have the job done. Bill chose the latter. I have contacted Catriona McKendrick of Cirtech who has kindly given us permission to publish the method should other Apple 2000 members wish to upgrade their plusRAM GS8 boards. The details had not arrived by the time we went to press so they will appear in the April edition.

High Speed DMA versus Cirtech SCSI

Using standard Apple IIgs computers with a Cirtech Diamond hard drive I've found that there is very little difference in bootup times for GSOS 5.04 between the Apple DMA SCSI card and Cirtech's own latest SCSI card which I believe does NOT use DMA! These boot up times are just about 2.5 seconds.

I've always been surprised that the Apple SCSI/DMA card isn't that much faster!

Dave Ward



Hypertext in Context

David Durling reviews a heavyweight book on Hypertext

Hypertext in Context

Edited by CLIFF MCKNIGHT, ANDREW DILLON and JOHN RICHARDSON.

Cambridge University Press (1991) The Cambridge series on electronic publishing.

pp. ix + 166, £16.95 hardback, ISBN 0 521 37488 X

Simply stated, hypertext consists of **nodes** or 'chunks' of information and **links** between them. Any text which references another can be seen as two nodes of information with the reference forming the link. Similarly, any text with footnotes can be seen as nodes of information, i.e. the text and the footnote, with the footnote marker providing the link. As such, hypertext is not new, with passing references going back to Aristotle. In the past there was certainly an appreciation of the interconnectedness of information.

Although hypertext is notionally implemented in paper-based documents, it has had to wait for the enabling technology of the modern computer's processing power to provide the associative links. What makes hypertext different, and sets it apart from the most conceptually intertwined paper document is that the links are machine supported. When the reader selects a hypertext link the apparent movement between the two nodes takes place automatically.

This book seeks to explore the tripartite themes of **people** using computer based **information** to perform a **task** in a hypertext environment.

In attempting to place current hypertext research in context, the authors have devoted some space to a history of the subject. Inevitably the 1945 Vannevar Bush article 'As we may think' is quoted, but the contributions of others are observed, from Ted Nelson (Xanadu and the Docuverse) and Doug Engelbart (Augment, and by the way the invention of the mouse) through to Randall Trigg (Xerox NoteCards). Even H.G. Wells had something to say on the subject. Bush, Nelson and Engelbart are seen as representing three different views of hypertext, each of which has its adherents. The Bush view sees it as natural and reflecting (or modelling) the mind; Nelson has a vision of hypertext as a storage and access mechanism for all the world's literature; and Engelbart sees it as an augmentation environment supporting planning and communication. Therefore it is clear that hypertext is not a unitary concept, that it can only be defined basically in terms of nodes and links, and that it may be manifest in applications which embody any or all of these differing perspectives. Additionally, hypertext may be part of a wider range of hypermedia (hypermedia is defined as including hypertext, but embracing other media such as graphics, sound, video etc.)

A comparison of electronic hypertexts with paper based documents is unavoidable: we have been using paper based texts for several centuries and the point is well made that literate societies have developed considerable skills not only in the reading of texts, but also in the handling of them. For example, the size of a textbook is obvious, so is the reader's position in the text at any time - no such visual cues are obvious in a hypertext unless they are explicitly designed. Some authors have tried to map the physical world of texts by simulation of book structures thus providing a virtual book, but the challenge is surely to find innovative cognitive structures for this new technology?

One main promise of hypertext has been that its associative linkages and apparent non-linearity will significantly alter the ways in which we read, write, organise information and by extension, think. Substantial space is given over to a discussion of the nature of earlier societies with an oral-based tradition and their transition to literate societies, with evidence offered that thinking strategies are indeed affected and enhanced in the case of the latter. However, balancing this view is other evidence that many paper texts are not as strictly linear as first appearances might suggest, and that at least some of the claims for hypertext are so much hype. Clearly, electronic texts do have substantial disbenefits particularly in respect of the reader's ability to retrieve information and to maintain a sense of travelling through the information domain.

Cognitive aspects of texts such as readability are reviewed together with an informative discussion of navigation, explained both in terms of geographical schemata and other models of cognitive mapping. It is helpful that these elements are dealt with in the wider context of information storage and retrieval systems. I was less happy with the reported findings from the authors' own research, which seemed somewhat lightweight and inconclusive in comparison with other chapters, although this did little to detract from overall enjoyment and utility.

This book would seem to be aimed at researchers in human-computer interaction, education, computer-based instruction and perhaps information science and the like, but it is written in a clear and helpful style which is penetrable by anyone interested generally in hypermedia. It is well produced, free from major errors, and has clear diagrams. There is an adequate glossary of various hypertext systems in addition to good author and subject indexes. It seems good value when compared with similar works on the subject. It is of course tempting to speculate on whether it should itself have been published as a hypertext...

David Durling
6 December 1991

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An Introduction to HyperStudio®

Reproduced from material kindly donated by Roger Wagner

Welcome to the world of HyperStudio® and the world of hypermedia! HyperStudio provides you with the complete system to create things on your computer that will make it more productive, more educational, and just plain more fun than you can probably imagine.

But first, what is "hypermedia"? You're already familiar with the various ways of exchanging information that currently exist. Newspapers, books, movies - all these are referred to as the media, and are those channels that handle the mass distribution of information. In addition, the term media also refers to the specific physical form that carries the information. This can be the printed word, a colourful artistic graphic, or an electronic image. However, for the most part, all of the current ways of conveying information in the modern world are passive. That is, you act as a silent viewer of the information presented.

The word "hyper" is derived from a Greek word meaning extreme or beyond. The word hypermedia was coined to describe a way of communicating that went beyond the current notions of the media.

Imagine starting with something commonplace, like a book. This is a typical form that information in our world takes. Now imagine that on each page of the book was not only text and pictures, but certain areas that you could touch with your finger that would suddenly expand into a whole new page of information, or that would perhaps instantly take you to an entirely different part of the book, perhaps even to a completely different book. While you're thinking of that, wouldn't it be nice if the pictures on the page could actually be animated to show a bird flying, or the path that an army during the Civil War followed? Better still, imagine hearing the sounds of the battle while you read the text!

Well, imagine no more, because this is exactly what hypermedia offers, and in particular, what HyperStudio delivers! In this "hands-on" introduction, you'll see how a hypermedia application is created with HyperStudio, and get an idea of the tremendous variety of new applications now possible on the Apple IIGS!

The HyperStudio Package

The standard HyperStudio package consists of both hardware and software:

- Software: 4 disks; System disk, Program disk, Clip-Art disk, Sounds disk.
- Hardware: No-slot sound digitiser card and microphone.

Software

HyperStudio and its associated programs run under GSOS. The main programs included are:

- **HyperStudio**, the hypermedia viewing and authoring system for the Apple IIGS.
- **Sound Shop**, a dedicated sound digitising and editing utility.
- **Sound Browser**, a utility for quickly scanning disks and listening to digitised sound files.
- **Sight 'n Sound**, a utility for easily adding a start-up Super Hi-Res picture and/or sound that will be used as a given GSOS disk is being started up. The system beep sound can also be replaced with a custom recorded sound, such as breaking glass, an aeroplane crash, "oops!", or whatever.

Hardware

The hardware includes a sound digitiser and a microphone with stand. An optional battery-powered amplified speaker is available separately for \$9.95. The digitising card does not require a peripheral slot in the computer, and can be used in a "piggy-back" configuration that allows the concurrent use of other sound I/O hardware (Sonic Blaster, MDI Ideas, FutureSound, etc.) without changing wiring, removing cards, etc.

System Requirements

HyperStudio requires an Apple IIGS with a minimum 1Mb total RAM. It runs under GSOS, and can be run on an AppleShare Network.

The memory requirements for any particular stack depend entirely on the individual characteristics of the stack you create. That is, depending on how many different backgrounds, graphics objects, and embedded sounds you use for a stack, the memory used by the stack can vary over quite a range. With no embedded sounds, and simple card backgrounds, your stack could have hundreds of cards in it. HyperStudio is designed to optimise memory usage by compressing memory, and other techniques. HyperStudio itself currently uses 256K of memory for the program itself and working buffers. Typical stacks that we've seen so far average 200K.

Digitised sound requires approximately 10K of RAM per second of sound. Thus, a 10-second sound would require 100K of memory. However, HyperStudio does not require that every sound in a given stack be loaded all at the same time, and in practice, the amount of sound available in a stack is more a function of disk size.

Use of Stacks by Others

There is no license fee required for the distribution of stacks created with HyperStudio to others. HyperStudio is required to run the stacks, but site-license and district-license arrangements are available at a reasonable cost.

Miscellaneous HyperStudio® Points

The following text was prepared as a quick collection of thoughts on what makes HyperStudio unique, and why it is a significant new level of software for not only the Apple IIGS, but computers of all kinds. We hope it answers some of the questions you may have, and perhaps also gives you some new ideas to think about.

1. **Truly easy-to-use hypermedia specifically for the Apple IIGS.** Not a clone of HyperCard on the Mac, but software created from the start with the GS in mind. Many users have said it's easier to use than HyperCard, in that HyperStudio is **"auto-scripting"**. It lets you do things, such as adding buttons, sounds, animation, etc. with just a mouse-click or menu choice, that would otherwise require manual scripting in HyperCard, or other authoring systems.

HyperStudio does many things that would be considered "extras" in HyperCard or other systems, such as support for laserdiscs, digitised sounds, touch-screens, animation, and much more.

HyperStudio is intuitive, offers immediate results, and is specifically created for the Apple IIGS, and also designed to perform and feel the way an Apple IIGS user would expect.

HyperStudio is used in grade levels as low as 1st grade. A 4th grade class in New York created an entire "Class Autobiography" using HyperStudio, and even creating a interactive video laserdisc.

HyperStudio's "auto-scripting" means that anyone can create impressive stacks without having to learn programming. Even if you are comfortable with programming, HyperStudio lets you achieve the results you want in a fraction of the time otherwise required.

2. **HyperStudio does not require a hard disk, or memory** beyond the now-standard 1Mb RAM. Once loaded, HyperStudio does not have to go back to the disk, unlike some disk-intensive software packages. A **single 3.5" disk** drive is quite sufficient for using the software. In addition, future run-time packages are planned for HyperStudio that will let users run (but not create) stacks in as little as 768K RAM. HyperStudio is **hard-disk and AppleShare network compatible**.

HyperStudio is sufficiently fast in its operation on a standard Apple IIGS. It is compatible with the Transwarp GS, but functions very well without it.

3. HyperStudio is a very self-contained environment, while still maintaining compatibility with third party software and hardware products. It isn't necessary to buy a lot of add-ons to be able to use the product.

At the same time, HyperStudio has built-in support for many advanced technologies, such as the Edmark TouchWindow™, Apple® II Video Overlay Card, and the Pioneer 2200, 4200 and 8000 LaserDisc players.

4. HyperStudio now lets those who can benefit from a rich computer environment do so at a very affordable cost. HyperStudio offers similar functionality to systems on the IBM or Macintosh that would cost many times as much as an Apple IIGS and HyperStudio.

5. Outstanding features:

- a. 640 mode colour graphics. Built-in paint program. Can import graphics from 8/16 Paint, PaintWorks Gold, Graphics Studio, Deluxe Paint II, and Computer-Eyes. [With Graphics Exchange from RWP, users can also convert Print Shop, News Room, 320-mode graphics, and even Macintosh clip-art]. Get clip-art function is rather nice in that it has uses a second window for the imported graphic. Some paint programs require that you close what you've got, load 1st screen, copy image, and then load orig. graphic for the paste. Package includes over 250 clip-art images.
- b. Button actions include branching to other cards, stacks, launching applications, playing sounds, animation, visual transition effects, right/wrong answer functions for tests, user-defined "Xcmds" in Pascal, C, or assembly language, and more, all selected with simple choices from menus and dialog boxes.
- c. Built-in text editor. Can import text from most word processors (as ASCII text file or AppleWorks 2.0+ word processor file).
- d. Built-in sound digitising. Includes sound digitiser card and microphone. Sounds can either be recorded right when a stack is being created, or Sound Shop can be used for more advanced editing functions. Many samples of music and sound effects are included in the package. Our digitiser is unique because it does not require a slot. Besides the obvious advantage of not using valuable "real estate" in a machine that is ever more slot-hungry, our card is also much more quiet in recording since we don't get any of the bus noise from the computer. The "piggy-back" design of the connectors on the card also means our card can be used right along with any existing hardware, such as the Sonic Blaster, FutureSound, etc.
- d. Pioneer 2200/4200/8000 video disc control. HyperStudio makes it a trivial process for anyone to add video sequences to any particular card(s) in a stack. There are over 500 video discs already in "print", and the number of video disc players is increasing at a tremendous rate.
- e. Apple II Video Overlay Card. For the ultimate in interactive video, use of the Apple II Video Overlay Card combines the video image with an on-screen computer image. This lets you put buttons over the video image, draw arrows, circles, etc. over parts of the image, or put invisible buttons over parts of the video image, to be clicked on by the user. HyperStudio has specific control of the Video Card, not just incidental use, which means better control of "shimmering" on screens that have no video image, good use of colour for the paint tools on cards with video, and the option for truly full-screen video, which includes the screen border area.

6. In education, teachers have long wished for good software for their own particular fields of interest. As a former teacher, however, I realise that time and money are always a lacking commodity. The problem is that very few people can spend the months of time normally required to write the software needed for a one-hour lesson. With HyperStudio, we have taken a dramatic step in the direction of creating a system where the time to create an application is closer to the time involved in using the application.

Drawing an analogy to written information, when you think about it, you can write (or word process) at a speed at least somewhat comparable to the speed with which your words will be read. True, the time to research and organise the information itself is still a big variable, but the medium itself (writing or typing) is within an order of magnitude of the time required to view the output. To date, this is a major barrier in computer information - the time to create the program is significantly longer than the final application. In some ways, the process is closer to hand-drawn animation. The only reason most computer applications are practical is because the user is willing to repeat the same basic action over and over again - typing for example. This means a programmer can spend two months writing a section of code, because that section will be used thousands of times. When it comes to educational software, where any given part of a program is only used once, the usage/creation time ratio becomes very critical.

HyperStudio is a breakthrough product because teachers will be able to create an enormous number of educational stacks in a time amount that is, for the first time, practical.

7. Subjects presented with HyperStudio can be done with the teacher's own preferred emphasis and vocabulary. Highly specialised software such as ESL, safety, drug awareness, etc. is now an option by using HyperStudio to create the needed material.

8. The real signal that a product will be a success is when non-computer owners see a demonstration, and ask not "How much is the software?", but rather, "How much is the computer?". It is this reaction that is responsible for VisiCalc selling the Apple II way back when, and desktop publishing selling the Macintosh in recent years.

Because of the great impact of colour graphics and sound on the Apple IIGS, HyperStudio could well sell more Apple IIGS machines than even HyperCard has sold Macs. Why? Because the Mac with HyperCard does show that the basic idea of interactive software, but all applications are in black & white, with little or no sound (and poor sound quality when used), and no use of interactive video on-screen with the computer images. Some of these problems can be solved, but only at costs of \$10,000, or more.

9. Availability of stacks; third party products.

The stacks created with HyperStudio can be distributed by their authors in any way they wish. This can be to other teachers in the school, other users in a club, or sold as commercial software. We have already been contacted by a number of private individuals, and commercial software companies, interested in producing and distributing stacks. CompuServe, Genie and America Online now have HyperStudio software libraries for exchanging public domain stacks.

Some Users' Groups are already offering member-created disks with HyperStudio stacks as part of their club library. A2 Central, publishers of the monthly Apple-related newsletter, is now offering a new publication, Stack Central, which is a HyperStudio-oriented "magazine on a disk" offering sample stacks, clip-art, articles about what others are doing with HyperStudio and more. There is also a newsletter, called the Hyperlearning Forum, available for HyperStudio users.

Roger Wagner Publishing, Inc. is also working on a catalog for HyperStudio users that will feature commercial and public domain stacks, accessory products, and other information.

10. Special Education. Because of the simplicity of "point and click" operation, HyperStudio is an excellent tool for the creation of software for computers users with various disabilities.

The ability to easily create stacks with voice prompting and reinforcement, large on-screen text, animation, and other features makes HyperStudio a very powerful tool. In addition,

HyperStudio has built-in support for the Edmark TouchWindow, which makes it possible to create stacks for use by very young children, or the general public unfamiliar with using the mouse to operate a computer. Using the Auto-Activate buttons in HyperStudio, it is also possible to create stacks that can be operated by simply clicking the mouse button (or other switch device). This means almost no motor

control is necessary to use the computer.

11. Home users with small children. Imagine taking the "Animals" screen from the HyperStudio disk, and doing a live recording of the animal's name, with an invisible button for each animal. When a child clicks on each animal, it says the animal name. I've even tried this with a two year old, and had the child say each word. You should see the absolute delight when a child hears their own voice from the computer. (Words are insufficient to communicate the actual thrill - I sincerely suggest you try this with a young child yourself, and judge the results for yourself!)

12. New medium for school reports. HyperStudio provides an entirely new way for students to create reports on a given subject. Rather than the tired, old written report, going from "Thomas Edison was born in _____", and ending with "He died in _____", imagine a hypermedia report where you can hear Edison's immortal "Mary had a little lamb", and explore Edison's life via the logical connections of various events.

Common Questions About HyperStudio

What is the minimum hardware required?
HyperStudio will run on a now-standard 1Mb Apple IIGS, with a single 3.5" disk drive.
How much memory does it take for a stack?

□ The biggest factor is whether you embed sounds in a stack or not. Excluding the sound data, a 10-card stack might use 150K of RAM. Stacks can also be linked together, though, and so the actual size limit of a particular stack is not very critical. In fact, many people find it easier for a variety of reasons to break up the actual files into smaller stacks that branch among themselves.

Sound recordings take up about 10K of RAM for each second of the sound. However, sounds can also be disk-based, so the only memory needed is for just a particular sound as it is being played.

Do I need a hard disk?

□ We use a hard disk in our demonstrations because of the huge (30 Mb as of this writing) amount of public domain stacks that we like to have available as on-line as examples of what HyperStudio can do. HyperStudio is hard-disk compatible, and easy to install, but a hard disk is not required for its operation.

Do you need HyperStudio to run the stacks? Is a "run-time" version available?

□ HyperStudio stacks are simply "documents". That is, like a word processing file or a picture from a paint program, your stack is simply data. It is not an executable program in and of itself.

HyperStudio is required to make the stack operate.

However, there is a "run-time" version of HyperStudio that has no editing functions, and which you can use to create disks that you want to give to others who want to use your stacks. For non-commercial use, there is no fee for using this run-time version of HyperStudio. If you want to sell the stacks you create, the run-time version can be licensed, much like Apple ProDOS, for just \$100 per year per product.

What are the main differences between HyperCard and HyperStudio?

□ HyperStudio was not created as a clone of HyperCard, but rather as an expression of what we thought an Apple IIGS user would expect out of the hypermedia concept. Hypermedia products from other companies are almost always designed as tools for a programmer, not the non-technical student or teacher just interested in creating something in a reasonable amount of time.

HyperStudio sits on the shelf next to Print Shop and adventure games, and our audience does not expect to have to learn programming just to connect two cards and play a sound.

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Regarding HyperCard specifically, each program has certain strengths. HyperCard is better suited to database type operations like searching and sorting, and printing reports. On the other hand, HyperStudio is much better suited to the general environment of the Apple IIGS with its sound, graphics, and the general overall computer experience for the user. HyperStudio includes many functions and options that would have to be bought as add-on products in other hypermedia products. HyperCard assumes that the user has several megabytes of memory and a hard disk.

HyperStudio is designed for a GS - not a Mac - and is optimised specifically for that machine.

As a few examples, there are kindergarteners creating stacks with HyperStudio, and 4th graders creating interactive video stacks. We do not believe this would be as likely, if even possible, with any other hypermedia product.

Can HyperStudio be Site-Licensed?

Yes. HyperStudio is AppleShare compatible, and is a multi-launch application. If you are a school or business with a number of computers, HyperStudio can be licensed for use on all your computers at a good discount. Currently, the minimum site-license cost is \$375 for five computers, including all the HyperStudio hardware and your choice of an amplified speaker or lightweight headphone. Additional computers after the first five may be licensed for an additional \$75 each with complete hardware, manual and disks, or for \$45 per computer without hardware.

Prices per computer are less with larger numbers of computers. As a general rule-of-thumb, you can probably estimate that it will cost about the same or even less to license HyperStudio than AppleWorks.

Is HyperStudio available for other computers?

No. HyperStudio only runs on the Apple IIGS, owing mainly to the uniqueness and power of that particular machine. No other computer offers the total package of sound, graphics, speed, memory, etc. at such a cost-effective price. As an example, a complete interactive video station, including laserdisc player, video overlay card, and touch-screen, can be put together using the Apple IIGS and HyperStudio for well under \$4000. On other computers this could cost 2-3 times as much.

Should I get the Apple IIe-to-Apple IIGS motherboard upgrade?

In our opinion, no. The IIe-to-IIGS motherboard exchange costs \$500, and does not give you a new case, 1 Mb of RAM, detached keyboard or mouse. Consider this alternate: Sell the CPU only of the IIe computer for \$400, and buy just an Apple IIGS CPU for about \$800 (educational discounts may offer even better prices). Now for \$400 (\$100 less than the motherboard upgrade), you've got a "real" GS with 1Mb RAM, keyboard, mouse, and case that fits future accessories.

Even if your budget means you have to use a monochrome monitor and 5.25" drive for a while, you can upgrade your equipment over time. If you sell your monochrome monitor with the IIe, you can buy a Magnavox #815 RGB Monitor for about \$239 mail-order that works fine as a GS monitor.

In particular, schools considering new equipment purchases should never buy IIe's thinking they're less expensive than the GS. It is the colour monitor and 3.5" disk drive (and there are \$150 AMR 3.5" drives as a substitute) that make the GS appear to be more expensive. At the least, substitute the GS CPU "under" the IIe monitor and drives you were planning on getting, and you'll have a faster, more-memory machine that keeps your future options much more flexible.

What kind of cable should I use to connect my tape player or CDROM to the GS and the HyperStudio digitiser?

Radio Shack stores carry a wide variety of audio and visual equipment cables. The easiest way to get the correct cable is to take both the HyperStudio microphone and the cables you are currently getting sound out of your tape/CD with (i.e., the

headset, wires to the amplifier, etc.), and ask the salesperson at the Radio Shack to give you a cable that looks like the HyperStudio microphone on one end, and the connection for your tape player/CD on the other.

If you already have the HyperStudio speaker (\$9.95 from RWP - see coupon in HyperStudio box), you can use the cable that comes with it to attach most walkman-style tape players and audio CD players to the HyperStudio digitiser.

What kind of cable do I need to connect the GS to the Pioneer laser disc player?

This is a serial peripheral cable, available from Pioneer dealers. Ask for cable #CC-04.

See the HyperStudio Resource Guide for more information on products that are useful additions to HyperStudio.

HyperStudio* Demonstration Kit

This package is provided to assist you in demonstrating HyperStudio to any group. It contains not only demonstration stacks, but copies of reviews, hands-on scripts for unattended sessions, and more.

After reviewing the contents of this kit, if you should have any additional questions or comments, need more materials of any kind, or would like to find out what new demonstration disks, etc. are available, please contact Roger Wagner Publishing, Inc. at 1-800-421-6526 (619-442-0522 in CA).

Notice: The HyperStudio software included in this Demonstration Kit is **not public domain**, and may not be copied without written permission from Roger Wagner Publishing, Inc. If you would like to make copies of this software for others, sign and return the permission form included in this Kit. We will complete the form and return it to you, at which point you may make copies for others.

Package Contents:

• Disks:		
	HS.System	Demonstration version of HyperStudio system disk.
	HS.Demo	Demonstration version of HS.Demo disk.
	HS.Sounds	Demonstration version of HS.Sounds disk.
	More.Stacks	Misc. demonstration stacks.
	More.Stacks2	Misc. demo stacks, vol. 2.
	VideoDemo	Demonstration stacks for various videodiscs.
	Com Stack	Lesson on language & communication - 9th grade.
	MUG.087	"Read & Listen" stack from Manchester Users Group.
	USA	This is the beginning of a USA-facts stack. Currently, information is on Arizona.
	HS.Art2	Converted public domain Print Shop graphics, for use with HyperStudio; downloaded from GEnie.

• Miscellaneous HyperStudio Points

This is a collection of thoughts about HyperStudio, what is unique about it, the value of hypermedia in different applications, and other ideas that may prove useful to you in answering questions, and creating the content of your own presentations.

• Hands-On Script

This booklet is a script provided as a hand-out for those situations where a group of people has access to an Apple IIGS for a hands-on session for getting to know HyperStudio. Each Apple IIGS should have at least one 3.5" disk drive and 1Mb RAM. Additionally, if the participants will be recording their own sounds, the HyperStudio digitiser with microphone will be needed. Each station should be provided with the HyperStudio disks HS.System, HS.Demo, and HS.Sounds. You may also want to provide additional sample stack disks selected from the other disks in this Demo Kit.

• Reviews & Flyers

A sample of the HyperStudio flyer is provided in the kit.

along with copies of several other pieces of literature that may be of value in a presentation. You may duplicate these if you wish. HyperStudio was also the featured cover story in the September 1989 issue of *inCider* and was prominently reviewed in the March 1990 issue of *inCider*. If you would like copies of these or the colour flyers for your presentation, please contact us and we'll do our best to provide you with anything you may need.

Special Features: Adding a Video

Adding a video sequence to a stack is easy. In fact, the steps that are about to be described work very well in a presentation. It is great to show how such an easy process in HyperStudio can give such dramatic results.

Interactive video in HyperStudio is based on use of the Pioneer 4200 LaserDisc player, and optionally, the Apple II Video Overlay Card. The Pioneer 4200 is attached to the Apple II GS modem L port, using a simple modem cable with the proper connectors on each end. You must make sure your "Slots" setting in the Control Panel has Slot 2 set to "Modem", and the "Modem" setting is set to 4800 baud.

To add a video sequence to a card in a stack, do the following:

First, choose New Card from the Edit menu. (If the screen does not erase, immediately press Apple-E to erase the new screen. This makes it obvious to those watching that a new card has been created.) Before proceeding, make sure that a Pioneer 4200 (or compatible) video disc player is attached to the modem port of the Apple II GS, a disc inserted, and the player in the "Play" mode. (The control panel for the Modem Port should also be set to 4800 baud).

Now choose "Add a Card Video" from the Objects menu. A dialog box will appear that asks whether you want a Full Screen Video, or a Partial Screen Video. For the moment, choose Partial Screen.

If you have the Apple II Video Overlay Card (VOC), HyperStudio will then display a rectangle, with handles, that can be re-sized and positioned as you wish. This rectangle determines exactly what portion of your video image will be displayed on the card. Changing the size of the rectangle does not fit the entire video image into the new rectangle. Rather, this is just a "window" onto the video image produced by the videodisc player. Also displayed will be a video disc remote control display. When dragging the rectangle, wait just a moment after pressing the mouse button to give the software time to hide the remote control display, before moving the mouse. Also, you'll have better results if you position the tip of the arrow cursor on the actual corner of the video rectangle frame, rather than grabbing the corner rectangles themselves.

If you don't have the VOC, you can still use HyperStudio to bring up a given image of sequence in connection with any particular card. If there isn't a VOC in the computer, HyperStudio will display the Remote-control box on the screen, but will not put a rectangle on the screen. In this case you would use a second TV or monitor to display the output from the videodisc player.

A video sequence is defined by specifying the beginning and end frame numbers of the video to be shown when the current card is displayed. The radio button starts on the "Begin" setting. Click on the Play, Scan or Step buttons to find the beginning of the sequence you want to use. If the disk is Playing, clicking on Step or Pause will stop the disk on that frame, and update the frame number register with the current frame number. You can also press the Clear key on the Apple keyboard, and enter a new frame number. The player will then jump to that frame. To set the ending frame, click on the "End" radio button, and then click on Play to let a few seconds of video roll by. If you don't have motion video available, just leave the End frame # the same as the beginning.

You can test your video by pressing the Test button. When you get the sequence you want, just click on the Keep button.

That's it! Now, whenever this card is displayed, the video sequence will be shown as well. To test this, just press Apple-B (or choose Beginning card from the Move menu) to move to the first card in the stack. Now press Apple-N (or choose Last card) to move back to your card with the video image attached. The video image will be displayed as you defined it.

A video sequence can also be attached to an individual button, rather than a card. The difference is that the video will only be shown when that button is pressed, rather than immediately when the user moves to a given card.

Creating a Full-Screen Video

In normal use, the video image (with the Apple II Video Overlay Card) will only show through the region defined by the video rectangle used when Adding a Card Video. However, the Video Overlay Card works by defining a colour as the "key-colour", or "show-through colour" on the screen. Before a video is added to a card, the key colour is purple. The purple hue on the screen changes to a pure blue once a video object has been added to a card.

There are two degrees of "full-screen" on the Apple II GS. The first is the active screen area, excluding the border area. The larger full-screen includes the monitor border area as well. You can design a card to use either method.

If you want to create a video image that fills the entire background of a card, you can do this by painting the entire card background with the proper show-through colour. The colour to choose for filling the background will either be purple or blue, depending on whether a video has already been added to a given card, but its position in the colour table will always be the same: colour #6. That is, in the "Colors" menu, choose the second colour from the left in the second row from the top. If you are using the "Set Background Colour" menu option (Options menu), use the 6th colour choice from the left.

When your video image is displayed, the video will be seen across the entire screen, regardless of the actual video rectangle. In most cases, you'll find it easier to just make the video rectangle as small as you can, and then move the video rectangle to some out-of-the-way spot on the screen (but still over an active video show-through area).

If you want the video image to fill the screen border area as well, then click on "Yes" when first adding a video, when you see the dialog box asking if you want to show the video in the screen border area. The only real difference between these is that HyperStudio changes the GS border color to the "key-color". This will allow the video image to go to the absolute edge of the monitor screen.

The advantage of using the background graphic itself (as opposed to the video rectangle) for the video show-through area is that it is easy to re-paint a rectangle or other area if you want to change the image area. In addition, you can use the Add clip-art, or other paint tools, to overlay labels, arrows, or icon-buttons onto your video image. You should also try drawing some rectangles, with "draw filled" checked in the Options menu, in various colours. You'll notice that colours range from completely transparent (blue) to completely opaque (black, white, grey, and shades of red), and

others are in-between. This can create very neat effects that show a dimmed image of a larger video image, with a certain part "highlighted" by being 100% transparent, and thus brightest.

The real key here is to just experiment. You can't hurt anything, and you're likely to discover many useful techniques in the process. Also remember to experiment with using the paint tools to create small windows with video showing through. We've found that although the video rectangle is the easier to explain and use for beginning users, in the long run, using the paint tools will give the most flexible results.

How to Use This Kit

The Standard Package: (This applies only if you are using the complete package in your demo)

The standard HyperStudio package currently includes four disks (HyperStudio startup disk, HS.Demo, HS.Art and HS.Sounds), a digitiser card and a microphone.

The easiest way to start learning about HyperStudio is to simply start up the HyperStudio disk, and to click on the "Intro" icons. After going through the Introduction stack, explore the other stacks in any order you wish.

After looking through the stacks, we suggest you go through the HyperStudio manual installing the sound hardware, and working through the tutorial.

Explore The Extra Disks

Although HyperStudio has only been out a short time, people are already starting to create a wide variety of applications, and many of these stacks are available in the public domain.

A number of disks have been provided to you, as part of this kit, that are a sampling of what people have created. Some are very simple, and others are fairly complex. In all cases, the stacks were created by people who have only had a short time using HyperStudio. We think you'll be impressed by what can be created with very little experience.

The main sources for these stacks were modern services: GENIE, CompuServe and America Online. Some users groups are also starting to create disks with HyperStudio stacks that are quite good.

To examine any of the disks, go to the File menu, and choose Open Stack. Then insert the disk you're interested in, and click on the Disk button in the file selection dialog box. When the list of files appears, you'll see (in most cases) a Home.Stack (or similar sounding file). Choose that, and then use that Home Card to examine the various stacks available. When you want to examine a new disk, go to the File menu and choose Load Stack again. Find the Home.Stack on the new disk, and go from there.

A few disks only have one stack on them, and so don't have a Home.Stack to load. These exceptions are noted for each disk, and the file listed would be opened to use the stacks on the disk.

Disks to look at:

More.Stacks: (load Home.Stack)

Stack Description

HyperBrain Shareware science stack on the human brain.
Solar System Science stack on the solar system.
Mouse Maze Move the mouse through the maze.
Optical Illusions Quick tour of common optical illusions.

More.Stacks2: (load Home.Stack)

Birds Short example of notebook-style stack with digitised pictures done with Computer-Eyes video camera digitiser.
Cat Chosen specifically for its simplicity. Using the child's own voice can make even the simplest stack an effective tool.
Chessmoves An introduction to the rules of chess.
Computer.Stack An introduction to the parts of the Apple IIGS.
Hypermagic The Apple IIGS can really do magic with HyperStudio.

Com.Stack: (load Home.Comst)

This is really one stack. It is a lesson on language and communication created by a ninth-grade English teacher.

MUG.087: (open Reader.Stack directory, and load Read-And-Listen)

A very nice stack done with all the members of the family contributing. MUG is the Apple Manchester Users Group, and this disk is one of their club disks.

Video.Demo (load Home.Stack)

Video.Demo is a special demonstration disk that has stacks showing the use of interactive video with HyperStudio. On this disk are stacks that have been designed around five specific video discs. This is one of the most powerful demonstration tools available, not only for HyperStudio, but for the Apple IIGS, and also the Apple II Video Overlay Card. If you do not have a Video Overlay Card, you can still use the video demos, but you will need a separate monitor for the video images.

HyperStudio requires a Pioneer 4200 video disc player (or compatible) for the video stacks.

To use this disk, at least one of the following video discs is also required: The '88 Vote, from ABC News; Voyager Gallery, from Optical Data Corp.; BioSci Video Disc, from Videodiscovery; and/or

Greetings From Earth, from Video Vision Associates, Ltd. "Greetings from Earth" is no longer in print, but is a popular disc, and can still be found, and at a reasonable cost, in record stores that stock video discs. Even if you don't have any of these titles, you should still try at least one of the stacks, just to get an

idea of how they work. Although the video image shown with a particular card in the stack may not be correct, you will still be able to demonstrate to yourself that HyperStudio is properly retrieving a given frame number or moving sequence for each card.

USA (load USA.Home)

This is a stack recently begun by a HyperStudio user in Arizona. Done for his children, it is the start of a stack that will feature facts about various states of the U.S. Currently, the stack only has information on Arizona. Click on Arizona when you see the U.S. map. This really is a very nice stack, and will give you some good ideas. If you click on the Grand Canyon on the map of Arizona, you'll hear some theme music.

HS.Art.2 (to use in a stack, select either load a background, add clip-art, or add graphic)

This disk is converted public domain Print Shop GS clip art that has been downloaded from bulletin boards, changed to 640 mode graphics and colorised.

Going Home

Remember, even if the stack you're in doesn't have a Home Card icon, you can always press Apple-H (for "Home") to return to the last stack loaded that actually has the "Home.Stack".

HyperCard offers "scripting", which is a programming language that is used to define the actions on each card. HyperStudio is "auto-scripting", and almost entirely menu and dialog box operated. However, for those who do need the additional power of a programming language, HyperStudio Extended Commands can be written in Pascal, C and assembly language, and sample source files are provided in the package.

Can you read Macintosh HyperCard stacks?

□ The Macintosh stacks are a completely different type of document, and so are not readable by HyperStudio. In addition, many HyperCard stacks use Extended Commands written in 68000 code, which can only run on a Mac. The screen resolution of the Mac is also different (which would result in distorted screen images when run on the GS), and many Mac stacks assume 2-4 megabytes of RAM and a large hard disk.

Do I need a LaserDisc player and Video Overlay Card to be able to use HyperStudio?

□ No. These items are shown in presentations to demonstrate how well HyperStudio integrates much of the existing "universe" of computer add-ons for the Apple IIGS. However, they are entirely optional.

The Apple II Video Overlay Card is also not required to use interactive video with HyperStudio. If you don't have the VOC, then a second monitor can be used alongside the GS monitor to display the video image. When running a stack that has images that would otherwise use the VOC, HyperStudio automatically skips the display if the VOC is not present.

Which videodisc players does HyperStudio work with?

□ Currently, HyperStudio works with the Pioneer 2200, 4200 and 8000 laser disc players. However, we are currently working on "drivers" for quite a number of other laser disc and VCR players.

Can I use graphics from PaintWorks Plus (or other 320-mode Super Hi-Res graphics) programs?

□ HyperStudio operates in the 640 Super Hi-Res mode of the Apple IIGS, which is different from the 320 mode. Older graphic programs like PaintWorks Plus used the 320 mode. Most current programs like AppleWorks GS and PaintWorks Gold use the 640 graphics mode.

HyperStudio can display a 320 mode graphic as a full-screen image on a card, and invisible buttons can be placed on the card. It is also possible to convert some graphics using the RWP program, "The Graphic Exchange".

Bank Street Writer Plus

Dave Ward reviews a new version of this famous word processor

The Bank Street Writer has been around for a long time; since the early 1980's when it ran under DOS 3.x and used 40 column screens. The latest version The Bank Street Writer has been loaned to us by MGA Soft Cat for a review. This version of the Bank Street Writer runs under the ProDOS 8 operating system and can be used on 128K Apple // computers.

The Bank Street Writer is supplied in a 23cm by 18cm by 3cm cardboard box. The box contains a 100 page manual a Quick Start reference Card and a single 800K ProDOS formatted 3.5" diskette. Actually there is another version where two 5.25" diskettes are supplied.

The version for this review contained the 3.5" diskette. Reading the manual, which is always a good idea, is essential to get the best out of this or most other computer packages. On the first page of "getting started" one is instructed to make a backup copy of the diskette! Has the great protector come to its senses? Is this an omen for the future?

Being ProDOS 8 based the program boots up smartly without the need for a hard disk drive. For instance:

1) From 3.5" diskette :	14.0 seconds
2) Launched by ProSel_16 or Finder from 3.5" diskette:	9.0 seconds
3) Launched from hard disk through RamFast SCSI:	1.5 seconds

For test purposes I made a 5.25" version and as expected this system took much longer to boot up but the time was still acceptable. Well to put it into perspective it is actually faster than booting up a Macintosh or Apple IIgs into GSOS (except from RAM or RamFast SCSI with a hard disk) or IBM machines!

There are real differences between the 5.25" version and the 3.5" version which I couldn't reproduce. For instance the Thesaurus on the 5.25" version is a cut-down version of the 3.5" Thesaurus, but that didn't affect the results.

When the program boots up a 'credits' screen is first presented but only appears upon the screen long enough to be read completely from the 5.25" version. Soon after the main screen appears; an impression of the the forty column version is shown below, the eighty column version is much the same only wider.

TYPE IN TEXT AT CURSOR ESC FOR MENU MOVE WITH <,>,v,^

On the forty column screen the data entry box is 38 columns wide by 19 lines deep, whereas the eighty column screen is 78 columns wide. A flashing cursor rectangle is in the top Left-hand corner and the system is ready for data entry with insert mode active. The top three lines are used for messages and command entry and differ slightly between the 40 and 80 column modes. The four cursor symbols are accurately displayed in the real thing!

A 'pull-down' menu appears if ESC is pressed or you use the mouse to point at the 'PRESS ESC FOR MENU' message in the top right-hand corner of the screen:

FILE EDIT SPELL OPTIONS DISK QUIT

These pull down the following menus:

FILE:

SAVE FILE
RETRIEVE FILE
CLEAR FILE
PRINT FILE

EDIT:

ERASE BLOCK OF TEXT
UNDO LAST ERASE
MOVE BLOCK OF TEXT
UNDO LAST MOVE
COPY BLOCK OF TEXT
FIND/REPLACE TEXT

SPELL:

CHECK ALL TEXT
START AT CURSOR
DISPLAY WORD COUNT

OPTIONS:

CHANGE DISK LOCATIONS
DEFINE FUNCTION KEYS
SET TAB STOPS
ENTER PRODOS DATE

DISK:

RENAME FILE ON DISK
DELETE FILE ON DISK
FORMAT DATA DISK

Bank Street Writer contains some nice features that are easy to get to even though they involve going through the menus. In fact this can be done quite quickly without using the mouse. For instance there is a nice pop-up box giving the word-count:

- 1) Press ESC to bring up the menu.
- 2) Press S for Spell.
- 3) Press D for display word count.

Yes it is as quick as those three key presses! Of course one has to remember these key-stroke sequences whereas using the mouse is more intuitive but has the disadvantage of taking ones hands from the keyboard.

Crossword enthusiasts may find the facilities of the dictionary and thesaurus useful. To use the thesaurus just move the cursor to the word and press Open-Apple_T and if any synonyms can be found a window full of them will be presented. Two others may also be useful:

Open-Apple_W produces a window titled Word Search which prompts you with the word under the cursor and allows you to search for:



1) Words with wild cards ? for one character = for many. This feature would be even more useful to crossword 'cheats' if it allowed the wildcards to be the start of a word.

2) The word under the cursor is used to search the dictionary for anagrams! For instance the word medical produces decimal, claimed and declaim as well as decimal!

In both of the above you may enter your own words rather than the one under the cursor.

The spell checker is quite quick and can be used to check the whole document part of the document from the cursor or a single word. Checking the whole document is done word by word and one is warned each time a word is found that is not in the dictionary. A window appears with all words that the machine thinks are possible and you are given three choices:

- 1) Ignore the word.
- 2) Add the word to the dictionary.
- 3) Type in the word yourself.

Quit:

This option just asks if you are sure.

I used the Bank Street Writer to write this review and naturally found it different than other wordprocessors that I have used. I missed a facility for moving very quickly through the text with single keystrokes but this could be done fairly quickly by placing the mouse-pointer in the text window, clicking and then dragging the text in the direction I wished to scroll it. To be fair, however it does have the Open-Apple commands B & E to move smartly to the beginning or end of the file. When moving between menu items I found that the keystrokes were much easier to use than the mouse particularly when they became memorised. Bank Street Writer writes its files as BIN type which cannot be read by any other wordprocessors that I am aware of. fortunately there is a provision in the PRINTFILE option in the FILE menu to allow one to print a textfile to disk that can be read by other programs. Of course the formatting of the text used in Bank Street Writer will be lost.

Bank Street Writer knows about Apple IIgs computers and deals with one of their vagaries in an almost transparent manner. All Apple IIgs computer have a colour option in their control panel. This colour option only deals with the old Hi-res screens which, of course, Bank Street Writer uses. The default option on the control panel is that this option is set making it impossible to show good quality black and white text on an Apple IIgs. Many users of Bank Street Writer won't be aware of this; why should they. It would appear that Bank Street Writer checks this control panel option every time it even thinks of writing to its Hi-res text screen and TEMPORARILY changes it. As a result the text even on an Apple IIgs crisp and very easy to read irrespective of the setting of the control panel or when it is set!

Bank Street Writer has 20 function keys that can be set up as internal macros. I didn't need many but as time goes on you will find yourself using complicated keystroke sequences on a regular basis that can be converted into one of these simple but effective macros.

Bank Street Writer is a little wooden in the way in which it allows one to traverse the subdirectories that are common with ProDOS. Sure one can get used to it but it could be made a little more intuitive; why should one have to go to options to change disk location when all one wants to do is to load or save a document?

Conclusion:

It would be very easy for me to criticise Bank Street Writer just because it is different from other wordprocessors that I have used in the past. And because of these precedents Bank Street Writer was a little more difficult for me to get used to. The more I used Bank Street Writer the better I liked it.

Bank Street Writer is, then a nice wordprocessor to use and the manual is nicely produced.

Information:

Bank Street Writer was created by Bank Street Writer College of Education

The Apple // version was written by Gordon Riggs.

Bank Street Writer is published by Broderbund Software
17 Paul Drive
San Rafael
California 94903-2101

The review copy was kindly loaned by:
MGA SoftCat

41 Cinque Ports Street
Rye
East Sussex TN31 7A

Dave Ward

AppleLink TidBITS

Apple IIGS: Changing settings of the serial ports

Changing the software settings of the serial ports for either data format or parity disables buffering, often used during access of bulletin boards. If a program changes the settings for Data Format (bits per character) or Parity, the program should re-enable buffering.

To change through software the baud rate from 1200 to 300 on the serial port, use nnB, the command in the Technical Introduction to the Apple IIGS, Page 35. The baud rate change will not show up in the control panel. The control panel displays the settings that are saved in firmware.

If you are using the Printer port, the control character is a Control-L. If you are using the modem port, the control character is a Control-A. Use the following numbers for the baud rates.

n	Baud Rate	n	Baud Rate
0	Default	7	600
1	50	8	1200
2	75	9	1800
3	110	10	2400
4	134.5	11	3600
5	150	12	4800
6	300	13	7200
7	600	14	9600
8	1200	15	19200

For example, the following program changes the baud rate from 1200 to 300 under software control.

```
10 D$=CHR$(4):I$=CHR$(1)
20 PRINT D$;"PR#2"
30 PRINT I$;"8B": REM ENSURE 1200 BAUD
40 PRINT"This is a test of 1200 Baud"
50 PRINT I$;"6B": REM SET UP 300 BAUD
60 PRINT"This is a test of 300 Baud"
70 PRINT D$;"PR#0"
80 END
```

To verify that the baud rate is changing, run this program after connecting another system to the modem port. Depending on the baud rate for that receiving system, one of the sentences sent will not be legible.

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SCSI Termination

The low down on termination for the Apple II and Macintosh by Micronet Technology, Inc.

What is Termination?

Termination involves the placement of impedance matching circuits on the bus. In the case of SCSI, these circuits are typically placed at each end of the SCSI Bus (cable). These circuits are known as "Thevenin Terminators" and are simple resistor networks in the case of SCSI. These resistor circuits are composed of a 220 ohm resistor connected to Vcc and the signal node, while a 330 ohm resistor is connected to ground and the signal node. One of these resistor pairs is connected to each of the 18 active signal lines. The Vcc (+5 nominal) for the terminators is typically provided by line 26 on the SCSI bus cable. In practice, however, this voltage is sometimes supplied by the SCSI device (hard disk) directly to the terminator circuit if the circuit resides on the device itself. In this case, Vcc on line 26 of the SCSI would not be required.

Why Terminate?

Terminating a SCSI bus preserves high transition speeds, and when properly placed will clean up the signal along the entire length of the line. They also provide a reasonable degree of noise immunity. The most important reason to terminate an SCSI bus is that termination is required for the bus to work! The ANSI SCSI specification calls for the bus to be terminated in the way described above.

How to Properly Terminate a SCSI Bus

A SCSI bus is properly terminated by placing bus terminators at each end of the bus. There are a couple of exceptions. If the bus is very short (i.e. 18" or less) then generally it is best to terminate just one end. Also, if the cable length (6 meters maximum) between two devices is greater than 10 feet then the cable should be terminated at the 10 foot point in addition to each end. When daisy chaining three or more SCSI devices the bus will often exceed this 10 foot specification and will require three terminators in the chain to work properly.

Physically, terminators generally have three forms in the Macintosh world. Electrically, these three types of terminators are equivalent and vary only in where and how they are installed.

First, are the ON-DRIVE terminators which are known as resistor packs (or sips, or dips). They reside right on the device (hard disk) itself and are almost always removable. Always note the orientation of these parts before attempting to remove these! They have a polarity and must not be inserted backwards.

Second, there are the terminator blocks or plugs. These are short "plug like" devices and are inserted between a hard drive cabinet's SCSI connector and the SCSI cable or on the second cabinet connector if one exists. Don't confuse these with the ON-DRIVE terminators described above. ON-DRIVE means literally that, on the drive (HDA) not on the cabinet.

Third, are the "Mother Board" Terminators. These may look like a SIMM or they may look like a narrow plug. They are used ONLY when there is no 'internal' hard drive in the Macintosh AND you are connecting an external SCSI device (hard drive) with an SCSI cable longer than 18".

They are inserted into the 50 pin SCSI connector inside the Macintosh where the cable for an internal drive would normally connect. These Mother Board Terminators are keyed (a polarity notch) and must never be inserted backwards!

Never use the second type of terminator when the drive inside a cabinet has terminators installed on it.

Common Termination Problems

Poor Quality Cables. Always use cables which are double shielded (foil and braid). Apple and MicroNet brand SCSI cables are built with specifications that include twisted pair and double shielding. Never use simple printer type RS232 cables! Make sure the connector hoods (or shrouds) are each connected to the shield braid!

Too Many SCSI Devices Terminated. Only the last SCSI device (disk drive/tape drive/scanner/printer) should be terminated. If the Macintosh has no hard disk drive installed inside it, then a Mother Board Terminator should be installed if the cable to the external device is longer than 18". MicroNet Technology developed what is called the "MBT", which can be used to terminate the Macintosh SE, SE/30, II, IIx, IIcx, IIci when an internal hard disk drive is not present and is available through MicroNet resellers.

Total SCSI Cabling Exceeds 6 Meters (19.6'). The total length of all cables used (added together) must not be greater than 6 meters. Don't forget to add the internal cabinet wiring which is generally about 1 foot.

Never use a plug type terminator designed for installation on a cabinet connector if the SCSI device (hard disk drive or tape drive) inside the cabinet already has terminators installed on the drive!

Never Exceed the Maximum Cabling Length of 6 Meters (19.6 feet) Total. Never mix cable brands, types or styles. This is a common source of trouble. Each cable has a different type of construction, impedance and wire placement which can result in bus reflections. In mixed cable configurations some devices may simply not work even if all other guidelines are followed!

Macintosh and The SCSI Reset Line and On-Drive and Off-Drive Termination

Pin 40 of the 50 pin SCSI connector is the hardware reset line. When the Macintosh is first turned on (cold boot time) it repeatedly asserts this reset line in order to reset all attached SCSI devices. Generally, this poses no problem. Some non-block devices can have trouble recovering from this reset condition and cause other attached devices to have trouble. Most notable are older SCSI scanners and tape drives. The most common symptom of this problem is a Macintosh that won't boot from a hard drive when a scanner or tape drive is attached to the same cable. This problem can also occur when using some of the first generation SCSI hard disks. They will enter a 'Unit Attention' mode and will not respond to read or write commands until a 'Request Sense' SCSI command is issued by the Macintosh. Newer drives will simply abort the Unit Attention condition after it receives several read or write commands and eventually will respond to the data requests. Symptoms of this later problem will be a drive which will not show up on the desktop the first time the Macintosh is booted but will show up fine the second time around. It should also be noted that whenever a SCSI device is first powered on it also enters this Unit Attention condition. The symptom for this is again a



drive which will not show up on the desktop (mount) the first time the Macintosh is booted. The purpose of the Unit Attention condition is to alert the Host (Macintosh) that an important event has occurred which the host should be aware of before accessing that device. The Host is then supposed to ask the SCSI device what occurred by using the Request Sense command. The Host would then take an appropriate action before making data requests of the device. A good example of this scenario is the resultant Unit Attention condition which follows the swapping of media on a removable media device, such as an optical cartridge device. It should be obvious why the host should be alerted to this swap before it "writes data to the newly inserted cartridge"! The Unit Attention condition following the swap would prompt the Host (Macintosh) to determine what event has caused the device to respond with a Unit Attention condition. When the Host (Macintosh) follows up with a Request Sense command it then learns of the cartridge swap and takes appropriate action. In this case it grays out or removes the icon on the desktop and mounts the new cartridge.

Hardware resets and drive power being turned off and then on again are considered important events. That is why they cause most SCSI devices to enter the Unit Attention condition. Older Macintoshes have trouble with devices which enter the Unit Attention condition because they don't follow up and query the device to find out the reason for the condition. Therefore, if the device doesn't clear the condition itself, the Macintosh's data requests will not be honored and the result can be a drive which won't boot reliably or at all. The fix for these types of problems is simply to cut the reset line somewhere in the cabling (line 40 at the 50 pin end).

Many subsystem manufacturers have taken this approach successfully. While this approach remains debatable it can be the only remedy for severe cases. While it won't stop devices from entering Unit Attention conditions at power up time, it will stop the hardware resets issued by Macintoshes at boot time from reaching the device. This can make the difference in booting and not booting!

The reason this topic is being presented here in a discussion on termination is that it is all important that the reset line (pin 40) always be terminated! If it is not, the device will be constantly resetting itself and will not work! Normally this is never a problem since line 40 is one of the 18 active signal lines which normally get terminated. But if you are working with a device which has line 40 cut inside its cabinet, AND you remove the ON-DRIVE terminators in favor of an ON CABINET (external) terminator then line 40 won't be terminated since the cabling inside the cabinet has this line cut. Therefore, pin 40 on the drive won't be terminated since this line is open and won't reach the terminator which is now on the outside of the cabinet!

The warning here is simply to verify continuity of line 40 on a cabinet's internal cabling before determinating the drive inside it. If line 40 has been cut on the cabling inside a drive cabinet YOU CAN'T DETERMINE THE DRIVE ITSELF unless you change the internal cabling to pass line 40 through to the outside connector of the cabinet!

Enough of these type of cabinets exist in the world that it is a real problem when reconfiguring bus termination. Another approach to handling a case like this is to put this drive (or device) on the end of the SCSI which should be terminated anyway and don't use an external terminator on the bus at all. If, however, you have more than one of these devices with line 40 cut inside its cabinet then you must consider changing their internal cable if you wish to determinate the drive (device) inside it and use external

'plug' type terminators.

Macintosh Configurations and Termination Issues

Point #1) Don't Be a Worry Wart

There is a lot of bad advice floating around. The purist will tell you that if you have more than two SCSI devices terminated on the bus you will blow up your Macintosh. This simply isn't true. If you have a third terminated device on the bus or even (heaven forbid) a fourth you are not going to pop the SCSI chip in your Macintosh. In some cases with older SCSI drives it may be necessary to leave the ON-DRIVE terminators in place in order for them to power up and to work at all.

Another purist might tell you that both ends of a SCSI bus MUST be terminated in order for anything to work. This again is junk talking. Take for example the fact that Apple doesn't terminate the mother board of certain Macintosh computers! If there is no internal drive in these Macintosh computers it simply never gets terminated like it should be (hence the recent availability of mother board terminators from MicroNet Technology, Inc., and Apple themselves). And since these Macintosh computers are always one end of the SCSI bus one might ask the purist why any SCSI devices work at all if there is no internal drive! The fact is that if the cable is fairly short (18" to 6') the Macintosh SCSI bus will generally function fine even if the Macintosh isn't terminated. However, the faster Macintosh computers, like the IIci and the IIfx may need internal termination in order for them to work properly.

The pursuit of the Perfect SCSI bus can be elusive. As soon as you add SCSI devices from different vendors and use the different cables supplied by each, you have a potential problem.

Mixing cable types, lengths, and styles is an invitation to trouble. But in the real world, there isn't much choice! This is largely why switching cables around and trying cables of different lengths has solved many problems. A part of configuring SCSI peripherals will always be determined empirically.

Questions and Answers

Q) Should I ever remove the ON-DRIVE terminators from a drive which is installed inside a Macintosh?
A) NO.

Q) Should I ever use a Mother Board Terminator if there is a drive installed inside the Macintosh?
A) NO. You can't! Each plugs into the same 50 pin connector on the mother board and you know what they say about two pieces of matter occupying the same space!

Q) What is a 'Black terminator' and when should I use it?
A) The black terminator is a product from Apple and is for use only with the Macintosh IIfx. It is an external plug type terminator and would only be used 'where and when' a normal external plug type terminator would be used! This black terminator differs (electrically) only slightly from a normal plug type terminator and not physically. Its purpose in life is to compensate for some changes in the new SCSI chip used in the Macintosh IIfx. If later models of the Macintosh use this new SCSI chip then it is likely to be recommended for those machines as well.

Prepared by the Engineering Department of
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Prince of Persia

Dave and Sam Ward travel to foreign parts to review an adventure game for the Apple II

It is the time of darkness. While the sultan is off fighting a foreign war, his Grand Vizier Jaffar has seized the reins of power. Throughout the land, the people groan under the yoke of tyranny, and dream of better days.

You are an adventurer from foreign parts who unfortunately has fallen in love with the Princess. The Vizier has imprisoned the Princess in the top room of the castle and has arrested you and placed you into the dungeons. The Grand Vizier has a warped sense of humour and has set an hour glass for 60 minutes during which time you must get out of the dungeons killing many of the guards in the process and then wend your way through the castle killing even more vicious guards until you rescue the Princess. This is the position you are in when you first boot the diskette.....

The package

Prince of Persia is supplied on a double sided 5.25" diskette together with a 10 page manual. The system is said to require at least 128K Apple II computers; Apple II/e, Apple II/c and Apple IIgs. The Apple II/e must also have an 80 column board. (Actually we don't think that it is possible to have a 128K Apple II/e without an 80 column card!) Presumably the program uses double hi-res graphics and will also require an Apple II/e with revision B or later motherboard.

We tested the program on a monochrome 128K 65C02 Apple II/e and an accelerated Apple IIgs with colour monitor. Although the program was on a copy-protected diskette it basically ran well on both systems. Although the manual informs one that the program works well on both monochrome and colour monitors we feel that a colour monitor is by far and away the best.

Controlling the game

The game can be controlled by the use of joystick or keys on the keyboard. We preferred the use of keys which were well laid out on the keyboard. You use the keys to walk, run, jump, stoop, climb, hang from broken floors above pits and to wield a sword to fight and hopefully kill the guards. During your adventure there are bottles of potions most of which give you an extra life, although some actually take away a life. The ordinary potions will only allow you to get to a maximum of three lives but there are super potions here and there which will let you add another life so far we've only managed to get up to six lives.

Well let's get on with the game before the precious sand runs out of the hour glass!! The dungeons have the appearance of blockwork wall with corridors on many storeys. You start level one with 3 lives and 60 minutes of time but 'ere you start you must find a sword which is in a pit. Pity if you meet a guard before you find the sword.

The objective is to find the door to the next level but on the way you are sure to meet many guards which you must defeat with your sword. The sword comes out automatically when you are facing the enemy if you just let go of the keys. The sword play is quite realistic if the old swashbuckling films are to be believed. The use of the sword requires some skill which is soon gained but unfortunately the guards become more skilled as you proceed!! On level one you must make three hits with your sword to kill a guard and as you proceed to higher levels some guards require even more hits to expire in a neat heap on the floor! The number of lives of the guards you meet are shown on the bottom right-hand corner of the screen whilst yours are shown on the opposite side.

This is where a colour monitor scores as these lives are difficult to see on a monochrome monitor. If a guard makes a hit on you the screen flashes red and you move back a step; pity if you are standing on a ledge with a pit below. Should you fall down a pit by two storeys you lose a life; fall three storeys and you die. In actual fact you can't die because you are reincarnated at the beginning of the level you were last on but there is of course the little matter of the time you have wasted in getting part way through a level to be killed and having to start it again.

As you walk or run along corridors some of the paving stones are loose and if you jump on them they fall into the pit below. Some of the paving stones above you can be removed in a similar way by jumping up and hitting them; beware though because if they fall on you a life is lost! Removing some of these paving stones can be helpful as you can climb up or down to another storey.

On the way you meet a skeleton which you can't kill with your sword and a small nefarious boy who delights in taking some of your potions. Many corridors have bunches of spikes that come up through the floor; you can walk carefully through these fields but if you try to run through them or land upon them while trying to jump them 'death' results. Some of the corridors are blocked by steel barriers that can be raised only if you tread on the correct paving stone elsewhere in the corridor. Some of other barriers are pairs of big blades which open and close rapidly and require some timing to pass through them. These can be quite useful as you can force a guard into them to kill it.

Conclusions

We've (well, actually only Sam) have reached level 7, which we believe is close to the end of the game, so we can't tell you how the game ends! what we can say is that The Prince of Persia is a good swashbuckling game that requires skill and speed to finish in the 60 minutes allowed. It is best played on a machine with a colour monitor.

Have fun!!

Sam and Dave Ward

Unfortunately the program has some defects, in our opinion:

- 1) The disk is copy protected and worse still you are expected to save your game to this copy protected disk.
- 2) The program permanently changes the control panel of any Apple IIgs on which you play the game. This is just sloppy programming since anybody capable of writing such intricate code to produce the Prince of Persia should know that such things can be done in a temporary way. You get your speed reduced to normal and the program decides how you like the default colours of your screen.

Prince of Persia is written by Jordan Mechner and published by:

Broderbund Software
17 Paul Drive
San Rafael
California 94903-2101

This review copy was loaned to Apple 2000 by:
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Compuserve Forum

A fascinating message thread from the MAUG Apple II forum

□ Bulletin Boards serve many functions, but one of the most important is that of providing a platform for debate. Like our own Bulletin Board TABBS, Compuserve is rich in Forums with specialist debating areas. Inside the MAUG area you will find many Forums devoted to the Apple.

The following message thread is a glimpse of what goes on. Although the initial message about problems with a printer card is lost, the remainder of the thread is rich enough to reproduce here.

If you are not already a member of Compuserve, and have a modem, see Page 11 for details of how to join.

Message: #24207, S/7 IIgs Software

Date: Sat, Aug 17, 1991 5:21:14 pm

Subject: #24175-GS/OS in big trouble

From: Gary R. Utter 72401,3251

To: Thomas Donaldson 73647,1215

Reply: #24226 (1 reply)

Thomas,

>>"And if you have any memories of Apples at all, to dismiss it as a 'weird 3rd party card' is an ABSURD statement."

Boyl Are YOU gonna feel silly when you find out who Bob Consorti is. Of course, if YOU had any memories of Apples at all, you'd know. :)

Gary

From: Thomas Donaldson 73647,1215

To: Gary R. Utter 72401,3251

I've lived overseas for many years. And again, I've not had any contact with the local Apple world. And not even much contact with appuser on C'serve. My opinions of Bob came directly from what I saw in this discussion: 1. He has been very helpful to me personally in getting up GS/OS on my machine. 2. He has given some opinions which struck me as apologies for Apple in the respects for which I was criticising them. As I mentioned in another message, gee guys, I'm sorry that this poor mortal has intruded on your inner circle. Perhaps I'll NEVER find out who Bob Consorti is. Given the tone of your message (just to give some of your opinions back to you!) maybe I really don't want to.

Best, and I hope your coterie's discussions remain happy and fruitful

Thomas

From: Gary R. Utter 72401,3251

To: Thomas Donaldson 73647,1215

Tom,

It strikes me as a tad silly for someone who has lived overseas for many years and not had any contact with the "local" Apple world to be chastising other folks poor memories of the Apple world.

Look, it's like this. We are more than willing to talk with "outsiders". However, "outsiders" who come in here, make outrageous and INCORRECT statements about an operating system that we all like DESPITE the way Apple treats this machine, and THEN call people who disagree things like "arrogant" based on the "outsider's" knowledge of a totally different platform can expect to take a little flak.

But it doesn't make you a bad person. :)

Nobody expects you to rave about GS/OS, nobody particularly cares. Nobody expects you to recant. But if you were as knowledgeable as you imply that you are, it wouldn't have

stumped you for a week, now would it?

The fact of the matter is, no matter how you would prefer not to admit it, you ARE wrong. Arguing with the folks here (who KNOW what is going on) is not going to convince anyone of your position. Give up the argument. If you can come down off your high horse and mingle with the hoi polloi, you might even learn something useful. Shucks, you MIGHT even like it here.

Gary

From: Thomas Donaldson 73647,1215

To: Gary R. Utter 72401,3251

Thanks for your utterly predictable and utterly wrong comments.

Best

Thomas

From: Gary R. Utter 72401,3251

To: Thomas Donaldson 73647,1215

ROFL!!!

After a maximum of half a dozen posts, YOU can figure out what I am going to say to the point that you can characterize it as "utterly predictable". You are MUCH better than I thought, people who have worked with me for a decade can't do that. I'm amazed that someone with your psychic powers couldn't figure out a simple little thing like a trashy OS. :)

Gary

From: Neil/Connie Laubenthal 76324,31

To: Gary R. Utter 72401,3251

Gary, I saw the answer to this post and after reading the entire thread I can only say... .What a Jerk. He comes here, asking for information and help; which is freely given and when we solve his problem he blames his problem on Apple calls us arrogant apologists and the like. You hit the nail on the head, "If you are as smart as you say you are then it wouldn't have stumped you for a week." Wish I had thought to say that (or as the latest teenage lingo would put it - Word me up.).

>>TTFN<< —Neil—

From: Gary R. Utter 72401,3251

To: Neil/Connie Laubenthal 76324,31

Neil,

Heh! I get lots of practice at this. Ya GOTTA be quick to do what I do. :)

Gary

From: Gary R. Utter 72401,3251

To: Thomas Donaldson 73647,1215

Thomas,

You are entitled to your opinion of GS/OS, but unless you can substantiate it with a lot more detail than the fact that it screwed you up in the installation, then you are talking through your hat.

My primary suggestion was that an Imagewriter would be a better idea than a Grappler 9pin (which won't do the job anyway) and an old MX80. I said you could buy a used one for UNDER \$300, and indicated that mine was available. I doubt that I would sell to you anyway, as I don't like to get into deals with people who have unreasonable expectations.

Gary

From: Thomas Donaldson 73647,1215

To: Gary R. Utter 72401,3251

That's YOUR definition. And maybe even your problem. I have pointed out my problems with GS/OS sufficiently by now. If you think these problems are a feature rather than a bug, so be it. And if you happen to be an employee of Apple, I DO want to make clear that my criticism is not of the people who actually wrote GS/OS but of the policies of Apple Corp which led to its (I think) premature release. I've worked in corporations too, and it is ultimately Apple Corp's responsibility to release good and complete software, not that of its programmers. I even respect and admire some of the GS programmers for Apple. But STILL ...

Best wishes

Thomas



From: Gary R. Utter 72401,3251
 To: Thomas Donaldson 73647,1215

>>"If you think these problems are a feature, rather than a bug..."

Actually, I don't think these problems are a feature OR a bug. I think they are entirely predictable but not worth solving. Sorry if I seem unsympathetic, but that is the way it is.

Gary

From: Gary R. Utter 72401,3251
 To: Thomas Donaldson 73647,1215

Thomas,

HAHAHAHAHAHAHA!!!!

BOB CONSORTI?? an APPLE APOLOGIST?!?!?!

Bub, you don't know what you are talking about, and every post makes that more clear. I don't care if you ARE a programmer on some other platform.

You are welcome to hold your own opinions, but I am getting tired of hearing them. People who DO know what they are talking about, (like Bob), people with good and specific reason to be VERY unhappy with Apple (like Bob), STILL admit that GS/OS in general and v5.0.4 in specific are extremely well written and competent pieces of software.

No one here is trying to defend Apple (that I have seen, at least), and no one here is saying that Apple dealers are, as a group, of rocket scientist caliber mentalities, but the fact of the matter is, there isn't anything wrong with the software you got except your ignorance of how to use it. That ignorance is not your fault, but neither is it the responsibility of Apple to hold your hand every step of the way and make any little problem impossible.

Try to relax. Accept the fact that the world ain't perfect. Learn to enjoy the power and utility of your machine DESPITE a few annoying inadequacies. Hang out here and pick up some neat tips. ENJOY life.

Or, alternatively...

Tense up. Sell the GS for whatever you can get for such a poorly designed, poorly executed piece of schlock. Buy yourself a super powered IBM clone and write your OWN software, so you won't have to figure out all the bizarre combinations of drivers and setup files and hardware switches that most people need to deal with. STRUGGLE a lot.

Sheesh.

Gary

From: Loren S. Damewood 70611,642
 To: Gary R. Utter 72401,3251

Gary,

>> apologist

I knew someone was going to jump on that, probably with much better effect than I could muster. I think Bob is being amazingly polite, don't you? ;-)

Loren

From: Thomas Donaldson 73647,1215
 To: Loren S. Damewood 70611,642

I'm glad, then, that someone else on this BBS has similar feelings about Apple Corp. However I think that if anyone reread these discussions he would wonder whether perhaps a tint of apology had crept into Bob Consorti's discussions.

Unfortunatley most of the computers I've programmed have been outside my personal price range and not intended as personal computers. If any of you live in the Valley, you might wish to check out Parallel Processing Connection. This isn't to say that I don't hope (& even expect!) that someday such facilities might actually BE in my price range.

I'd also be very interested to hear about Bob's own experiences/criticisms of Apple.

Best

Thomas

PS: Yes, I can freely admit that up until very recently I didn't know any of you. So I guess I'm "out of it". I'm happy that you all find your GSes so engaging and fulfilling. If you don't really want to discuss any issues with some mere mortal outside your group, so be it. I shall have to go my own way.

From: Loren S. Damewood 70611,642

To: Thomas Donaldson 73647,1215

Thomas,

I would hate for you to stomp away in disgust, just because of a little friction with some other members. The discussions are spirited, here, but seldom rancorous except when Apple is the target. In all honesty, and not wishing to cause offence to anyone concerned, I think that there's been just a bit more acid in this thread than was really called for. I looked back over it, though, and I don't feel you are entirely blameless. Nevertheless, I would like to recommend that you stick around. I'm sure that you will enjoy the forum, whether or not the occasional argument springs up. I read your original animadversions on the system software situation with an eye to what you'd been going through, and took no offence, which is why I tried to step in and cool things down a bit when your messages started attracting unpleasant responses. I'm sure you don't really want to get into long acrimonious arguments, and nobody else does, either. Sit back, read the regular message traffic, and try to pick up on the spirit of community that we have here, the existence of which you have found in our immediately leaping to the defence of our 'regulars' in the face of 'attack', real or perceived. If you don't want to be part of the 'in crowd' (do we have any such? Odd, I've never been 'in' in my entire life, always made a point of being 'out' . . . ;-) that's no big deal. Remember you can always lurk here for news and the answers to questions, and it is still the best place your computer can take you.

Loren

From: Gary R. Utter 72401,3251

To: Loren S. Damewood 70611,642

Loren,

Yes, Bob WAS amazingly polite. I had hoped that he would post his credentials as an apologist for Apple though. (smirk) Hey, BOB! I know you are being modest, but it would probably lend some (more) weight to your statements about GS/OS if you posted a short history of your life with Apple. (I woulda done it instead of just slinging ridicule, but I woulda goofed a lot of the important details.)

Gary

From: Bob Consorti - ON THREE, 75300,1543

To: Thomas Donaldson 73647,1215

Thomas,

As others have pointed out I'm the last person to think of as an Apple apologist. Since you are obviously quite ignorant of what is involved in getting GS/OS (and any other program) to recognize and NOT crash with all of the different interface cards out there, I will attempt to enlighten you. I say attempt because I have a feeling that you are too pig-headed to open your eyes and read this objectively but I will try.

ProDOS 16 was nothing more than a shell around ProDOS 8. That's the reason why your card works with ProDOS 16. Running a ProDOS 16 program is just like running on a //e because all of the I/O spaces are used in the exact same manner. GS/OS doesn't use bank zero like ProDOS 8 (or ProDOS 16) and if the interface card manages to screw things up to the extent it worked previously but not with GS/OS, then that's too bad - but it's not Apple's fault.

Many of the 'no-name' 3rd party text only interface cards work perfectly with GS/OS. Yours doesn't. The ones that do follow a minimum standard that Apple asks developers to follow, namely putting ID bytes in certain places that can be accessed by a host program. Most interface cards say "I'm a printer card and I support the Pascal interface standard" or "I'm a printer card and I support the Basic interface standard" or "I'm a disk drive card and I support the smartport/extended smartport interface standard".

Some stupid vendors did not follow the rules and their interface cards have ID's that say "I'm a disk drive card" when they aren't. Other printer interface cards say "I'm a printer card and support the Pascal interface standard" but THEY LIE. When a program sends information to the card the card doesn't set things up correctly, switches in I/O space when they shouldn't and crashes the system. They somehow work on a //e but a GS running GS/OS is not a //e.

The only way GS/OS crashes is if the interface card screws up



something by not following the rules. And it's not GS/OS that crashes, it's usually the interface card because it thinks it can do things however the hell it feels and get away with it. It boils down to lazy programmers who don't want to follow the rules.

For GS/OS to work with all of the different interface cards Apple specifically went out of their way to ensure compatibility with the overwhelming majority of non-name 3rd party interface cards, even the ones that sometimes lie and don't set things up/restore things as they should. Some interface cards lie so badly that nothing in the world GS/OS can do short of identifying that 'bad' card and having somebody at Apple reverse engineer their card and controlling rom driver and figure out what they did wrong and implement it as an operating system exception. In many cases the interface card design itself is to blame and short of modifying the interface card **NOTHING** can be done. That's not Apple's job, and if you think it is you are mistaken.

On another front, the 'history' of the Apple II contains dozens of other interface cards, memory cards, multi-function controllers that follow no standard and require program patches to work correctly. I guess you would feel taken and that GS/OS is still a pile of crap (to use your own words) if it didn't automatically recognize your old (if you had one) Legend RamCard. Or how about if you owned a Laser Universal Disk Controller card for your //e and tried to use it in your GS. Oops, the UDC card tells the operating system that it is a UniDisk 3.5 controller card. But, it lies and the I/O locations and format for data transfer is different from the Apple controller. The operating system looks and sees what it thinks is an Apple controller card and tries to talk to it. Boing... Or you have a printer interface card that follows all of the standards but was written specifically for an Apple //e in mind. When a certain control character is sent it automatically tries to do a screen dump. Only problem is when a GS/OS program prints it prints in graphic mode which means that all data bytes \$00-\$FF can be sent. The printer intercepts a character which is meant to be sent to the printer and says 'hey, this guy wants me to do a single hi-res screen dump' and switches I/O space around and boing... Or you have a printer interface card that accepts control characters to do //e style screen dumps but it also accepts a command to send it into blind output mode so that no characters are intercepted. Only problem is there is no way of telling which card is which because some cards have different disabling codes. The only way for the operating system to handle all of these situations would be to keep a copy of all of the different rom images and then compare them on startup to match to an exception list. Then they would have to keep different sets of drivers for each card to enable the correct response from the card which in many cases is not even possible because the cards were designed for the //e and the GS is not a //e.

Maybe you have an interface card that doesn't support interrupts. Not a problem on a //e (and in some instances running under ProDOS 16), but try to run GS/OS with an interface card that doesn't set things up correctly when it turns off interrupts and it will crash after the first access to the card.

History does mean something but it does not mean that Apple should expend its precious little Apple II resources to

ensure compatibility with every non-standard bastardized old-time interface card that exists. As I previously said, if Apple tried to do that we'd never have seen GS/OS and probably wouldn't have seen ProDOS 16 for that matter. Apple is not tied ball and chain to 3rd party developers who develop non-standard interface cards and don't follow the rules. They DO go out of their way to ensure compatibility with 3rd party devices which follow the existing rules.

I hope you open your eyes and see just how difficult it is for Apple to ensure 100% compatibility with everything that was ever written. They did a hell of a job. If you have one of the few interface cards that CRASH GS/OS (and it's not the other way around) then I feel sorry for you. But it's not Apple's fault that Videx didn't follow the rules. It's not your fault that Videx is out of business, but direct your anger where the fault lies and that is with Videx and not Apple.

BTW, I only get arrogant when somebody who doesn't think twice about how 'easy' it should be for GS/OS to do this.. spouts off. Apple spent hundreds of man-years of effort on GS/OS. It is an exceptionally well designed piece of software that offers near 100% compatibility with most everything. Don't belittle it because your interface card crashes it.

Either sell your GS and try a DOS machine with thousands of incompatible and mutually exclusive products or get a 'standard' interface card or a serial printer that can connect directly to one of the GS serial ports.

Bob Consorti: ON THREE, Inc.

*From: Thomas Donaldson 73647,1215
To: Bob Consorti - ON THREE, 75300,1543*

Dear Bob: Aside from the allusions to my personality, which I restrain myself from replying to in kind, your discussion so far is clear and helpful. Yes, I knew that Prodos16 was simply a shell around Prodos8. I will happily read the next instalment.

Thomas

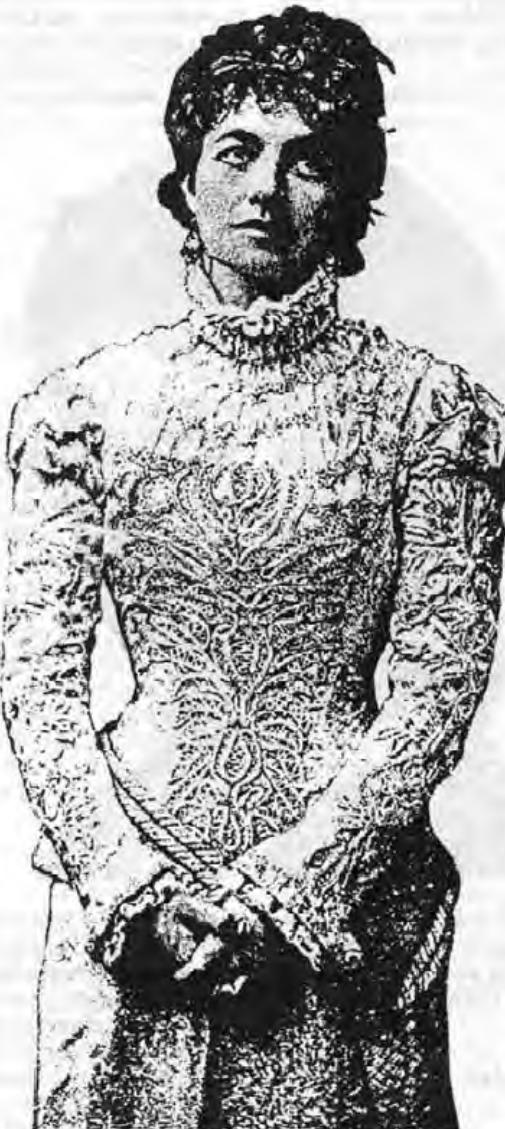
*From: Thomas Donaldson 73647,1215
To: Bob Consorti - ON THREE, 75300,1543*

Thanks a lot for your explanation of the innards of GS/OS. That was very interesting and I can see why the scheme they used could so easily run into problems. (And of course, if I knew in such detail about the inner workings of GS/OS I would have been more wary even before I inserted it).

While I can think of ways to avoid the problems you allude to (they would of course require redesign of the innards of GS/OS!) I don't want to get into a prolonged discussion about the innards of an OS with which I will openly state I am NOT knowledgeable. One point, which may have been lost in the shuffle, is that no piece of software released into the market can stand alone: where is

the documentation? Where is the list of compatible cards/interfaces/etc? My dealer certainly never gave me any indication that such things were needed (this was an "authorized Apple Dealer", suggested by Apple Corp themselves; I only downloaded from C'serve when it became clear that the dealer's disk was not working). If the breakdown is not in the software then it is elsewhere, and still comes back to Apple. That is, software without documentation is incomplete. Handing that software to anyone without also giving them documentation may hand them a time bomb.

Here is a suggestion for the next version of GS/OS. It should not require a radical rewrite. Incorporate into GS/OS a compressed file listing all those cards which ARE compatible with it; provide



an option for anyone booting it for the first time by which GS/OS will not only interrogate the CARD, but also ask the USER, before it touches the card, to verify that the card is one of the proper kind. It's clear at least to me that the idea of making the very FIRST boot of GS/OS happen automatically can run into deep do-do. If somebody sells a new card, he will know the rules of compatibility Apple has set out beforehand, and if he fails to follow them then any complaint about that maker will be fully justified. Since many cards were made prior to the IIGS, when their authors clearly saw no reason to pay attention to Apple's standards since they were not enforced in any way, I don't think those original cardmakers can be thought to be at fault. (In fact, as I recall, modem cards suffered from a major problem because there was NO WAY to both follow Apple's standards and get a decent performance; but I'd want to go back through my old books and verify that).

Naturally this "controlled booting" option can be turned off when the user is satisfied. As for updating the list of cards, remember that any new card can reasonably be assumed to conform. Anyone who writes a new DRIVER for an old card would of course provide an installation script and an update to the list.

And here I said that I didn't want to get into involved discussions of the internals of software with which I'm not knowledgeable!

Bob, you have been quite helpful. And it is clear that we disagree. Please don't so easily decide that your opinion is "objective" while mine is not.

Best
Thomas

From: Gary R. Utter 72401,3251
To: Thomas Donaldson 73647,1215

Thomas,
While your suggestion might or might not be feasible to implement from a standpoint of difficulty (I don't know the internals of GS/OS either). It ignores one teeny point. It isn't worth doing. The GS market is so small that spending the man hours needed to implement your plan is not going to be productive. In the second place, what happened to you is EXTREMELY rare. To make a major change in the system software to deal with a problem that MIGHT never occur again.....

Finally, there is no such thing as a list of compatible cards. No one keeps one, NO one has a complete list even of the CARDS, much less which ones are compatible. The reason Apple wrote rules in the first place was so that this would not need to be done, they then proceeded not to do it. No one else did it either. You are thinking in IBM terms. Apples are not supposed to need that sort of configuration nonsense, and for the most part, they don't. Your case is EXTREMELY rare.

Gary

From: Bob Consorti - ON THREE, 75300,1543
To: Thomas Donaldson 73647,1215

Thomas,

Since GS/OS has been out several years and you're the first person I've heard of who called it a pile of crap, I don't think your statement about the current version of GS/OS being a 'premature release' is anywhere near reasonable. BTW, who (GS programmer) do you know at Apple? I'm interested because if you do know somebody (anybody) at Apple you know what type of quality control they do to ensure compatibility. Since you obviously don't know, Apple has a whole department that tests things during the product development cycle. These tests ensure that things work for most everybody.

As others have pointed out I am not an Apple apologist. I (as a developer for over 8 years) have developed dozens of software and hardware products for the Apple //I, Apple //e and GS. I don't think I have to recite a litany of my problems with Apple corporate and their decision to drop the 'lower' Apples from

active marketing. Suffice it to say that I have lost several fortunes due to my dealings with Apple and I am none too happy about it. As others here will no doubt attest I have been a thorn in Apple corporate's side for some time because of their lack of Apple II developments.

But the developments that they do I am a booster of. GS/OS is a hell of a piece of software. Keep talking about it as if it was some hack and I'll continue to hack away at your unknowing remarks.

From your other remarks it is clear you know little if nothing about operating systems on PC's. When a new OS is released, be it GS/OS, Mac system 7, MicroSoft DOS 5.0, the programs/cards that didn't follow the rules crash it. It is that simple. If you are wary about using an OS because you have just enough understanding of its workings to be fearful they I suggest stop using computers and go back to hand-held calculators.

There is NO WAY for an OS to deal with some of these problems. If the card says (and yours does BTW) that it is a serial/parallel interface card and supports control and interrupt routines, the OS has to believe it as there has to be some basic standard to base things on. My guess is that your card lies and doesn't support interrupt routines properly.

Sorry, but adding some sort of compatibility list is both costly and unneeded. As a user I wouldn't want to have to purchase/download the extra disk of compatibility info. First off I don't think such a thing could be generated and be 100% accurate as I doubt Apple has a complete record of every no-name interface card made for the Apple //.

Vendors who didn't follow the rules got burnt on the Apple //e when their cards didn't work with other combinations of cards. Apple never rescinded any developers status because they failed to follow the rules, those developers simply closed up shop (like Videx) because their products didn't work with other hardware/software combinations and their sales went down.

The cardmakers who designed your card are at fault and they did something far worse than simply disregarding the rules. They appear to have only partially implemented them but their card says that they fully support them. That is why its causing problems, not because Apple didn't give you docs to go along with the disks. BTW, did you ask your dealer if there was any documentation to go along with it and after you had problems did you call your dealer for help. Most of the dealers aren't worth

their salt but if you ask they will usually say 'yes, but you have to purchase it'. Long ago my father taught me something that is particularly valid here - you get what you pay for. Do you expect Apple to give you disks and docs for free? And since I don't expect that you do, go and purchase the System 5 update and you will see that the limited compatibility list that is included does not have your interface card on it, nor does it discuss several dozen other no-name cards.

My 'opinion' is based on the last 8 years of my life developing low level driver routines for the GS and older Apple's, my work in creating numerous hardware and software projects and the people I personally know who played major parts in writing GS/OS. I've been there from the start, and I know my stuff. To paraphrase Bo Jackson - 'Bob knows operating systems'.

Since you don't know or seem to be able to fathom the problems in getting every piece of non-standard lying obsolete hardware to work on the GS I won't bother anymore. But please stop calling GS/OS a piece of crap. When you do so you simply show your ignorance.

Bob Consorti: ON THREE, Inc.

From: Loren S. Damewood 70611,642
To: Thomas Donaldson 73647,1215
Thomas,



>>I am NOT knowledgeable

But, you are beginning to achieve wisdom, right? (he who knows not, but knows that he knows not ... ::nudge-nudge:::)

>>where is the documentation?

If you had actually purchased the system software package, it would have had documentation with it. Ideally, the dealer could have offered it to you, instead of merely copying the sadly inadequate one disk that you ended up with. Bear in mind, the dealers are actively opposed to you buying a GS or using it in any way, so they aren't about to help you figure it out. They'd much rather you gave up and bought a Mac. (ever buy a used car?)

Loren

From: Marc Farnum Rendino 74040,73

To: Loren S. Damewood 70611,642

Thomas -

Just to avoid another outburst, what Loren is saying is that, as a user, you have two perfectly legal and socially acceptable :) methods of acquiring II GS System Software at an Apple dealer. You get copies of disks or you spend the big bucks and get the whole package, with manuals and everything.

It seems your dealer didn't let you know of your options, which is, sadly, not surprising. Most Apple dealers are not at all knowledgeable of Apple II's - or Macs for that matter. And that's a whole 'nother can of worms. :)

Anyway, like Loren said, I hope you do stick around - you've already seen, I think, that this is one of the best places to come for Apple II info. And spirited discussions. :)

- Marc

From: Marc Farnum Rendino 74040,73

To: Thomas Donaldson 73647,1215

Thomas -

Like I said, you've had a hard time of it, but it can't all be laid at Apple's doorstep. You can't expect Apple to magically make everything simple with every piece of software and hardware out there! And like I said, I'd bet a lot that the problem is that the printer interface broke some rules and misidentifies itself to the computer - definitely not Apple's fault!

As far as your sweeping (and apparently ill-informed) assessment of the software in general, I couldn't disagree more. From both a users view and a programmers view, I feel that the II GS System Software is one of the best around for any micro. I do understand what it's like when things blow up, and how angry that can make you (I once told an Apple department that "I wanted someone's head on a plate" after a particularly maddening crash grin) and how easy it is to blame Apple, but I really don't think it's their fault this time. Even if it were, calling it a "piece of crap" doesn't get anyone anywhere - least of all you.

- Marc

From: Jim Nichol 72747,3016

To: Thomas Donaldson 73647,1215

Is GS/OS the problem, or is it the printer drivers?

Does GS/OS still have trouble with your printer card when you remove ALL drivers related to printers? I would expect GS/OS to either ignore the card, or to generate its own driver. (unless it can't tell it's a printer card... you know, the ID bytes).

Jim

From: Thomas Donaldson 73647,1215

To: Jim Nichol 72747,3016

Hi Jim: That's an interesting idea. I didn't know that GS/OS could do that; and although I haven't heard from anyone about how to check the ID bytes, you might have a way of testing whether or not they are wrong.

Thanks for your help

Thomas

From: Merry Perry 71101,1276

To: Thomas Donaldson 73647,1215

Thomas,

I have been watching the discussion about your GS/OS problems and the tirade that followed with great interest. As one of the regulars here who knows the people and the situation with Apple, I have to add my comments.

My ImageWriter is the only part of my system that is left over from my //e days and I got it out of self defense. I had one program in particular that I wanted to run but it would not work with anything but Apple's printers (the Scribe was also available at the time, but I am glad I decided to spend the extra on the IW). I have never regretted getting it since I know it will work with all my software.

Since my GS has no room for a printer card, it also has the advantage that it is connected externally. Until a few weeks ago I had my old MX-80 attached to my MS-DOS laptop where it was fine on the few occasions I needed it (I do most of my printing at work on the laser or 24 pin printers.) The only reason I sold it is that I got a good deal on a newer used printer. And I was able to find a buyer with very little money who was delighted to have any printer that worked, even one as slow and poor printing quality as the Epson. Other than the expense of a new printer, I can't imagine why you would not want one that is more up to date. I can see not wanting to pay the price for a new one, but a good used one is worthwhile.

As for complaining about Apple and the GS/OS software, you are barking up the wrong tree. Since you admit you have not been around here until recently, you have not seen how often we complain about Apple and its treatment of II customers. To get the flavor of that, I would suggest you download the transcript of John Sculley's visit to this forum last fall. I'm not sure where it is, but I am sure someone can tell you.

For the most part, one of the things we do NOT complain about is the system software. We often discuss the merits of ProSel over the Finder, but even those of us who prefer the former do not fault the Finder for being buggy. I think I can safely say that everyone here looks forward to system 6, especially since we know that Andy Nicholas was hired to work on it. The current system may not have all the features we want, but it works extremely well and I never cease to be amazed at how seldom I have conflicts. I think blaming Apple because you have an old card is unfair and unrealistic. They designed their software to work with their hardware and third party stuff that follows their rules. I don't see why they should do anything else. Considering Apple's lack of marketing of the GS, I am grateful that they do continue to improve the operating system.

I think the cost is something else you should consider. I am quite happy that I did not have to pay \$49.95 for the new software, even though I would have gotten the documentation with it. Dealers can sell it or give it away at their discretion, but good luck finding someone at a store that can actually help you with it. It is unfortunate that your dealer did not give you that choice, but I bet they would not have suspected the printer card as the culprit, either. You are being unfair to the people here who tried to help you and suggested that you remove all your cards. If you aren't going to follow the advice, then why bother asking? You would not believe the problems that have been solved here even with weird configurations. I hope you will stick around and give us another chance to prove why this is the best place your computer can take you.

One other thing and then I will get off my soapbox. Bob Consorti never did tell you who he was, as far as I know. He is one of the reasons I joined CIS and I am one of his biggest fans. He is the CEO of On Three, which has produced a lot of super software for the late Apple ///. Having him defend Apple is hysterical, since he has been burned quite a bit by that company. He produced The Desktop Manager, a CDA type program that I think every GS owner ought to have, especially anyone who uses text based software as I do. He has a reputation as an outstanding programmer, since he also did the drivers for the Sider hard drives, as he did mention. The Apple community is fortunate to have programmers of his caliber.

Just out of curiosity, what software do you use to call CIS and how do you prepare your messages?

I hope I have given you some food for thought and that you will stick around and find out what a great bunch of people frequent this forum.

Compuholic ***.Merry P.***

□ The messages of course continued after this one, but this excerpt shows the level of debate that can be found on most Bulletin Boards and Forums.



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Comparative anatomy

It's no secret that I am now (nor will be) an unqualified supporter of the Apple Macintosh. My bias does not lie as much in the technology of the Mac versus competing systems as it does in the overwhelming way in which the Mac tries to lay the smothering blanket of its user interface over the user. For neophytes, this is fine and desirable. As your familiarity with the system increases, the Apple Desktop paradigms break down; how many of us have gone crazy trying to copy files from a folder deep within one set of folders to another deep within another set? About the fifth time you have to move and resize the windows, MS-DOS starts to look almost enviable. What's great about the Apple II is that we can run both the Mac-like desktop interface and more powerful alternatives such as ProSel.

Most of my comments regarding System 7 prior to this month have focused on its place in demonstrating that Apple has not treated the Apple II and Mac lines equitably in terms of promotion. Apple revealed most of its system software plans for the Mac well over a year in advance of System 7's release while at the same time refusing to allow any official discussion of upcoming features for Apple II systems. Given the uncertainty Apple had already generated in the Apple II market, Apple II users saw the System 7 uproar to be another nail Apple was driving into the coffin.

Now that System 7 is here, it's clear that many changes are cosmetic, with a few (but significant) "golly-gee" improvements. The cosmetic improvements do a great deal to ease some of the limitations of the original Desktop, using sensible extensions of the Desktop model. A few changes indicate ways the IIgs Desktop could be improved, and one particular change is of special interest to Apple II users.

Many of the improvements have to do with revising the "catch all" nature of the Macintosh's System Folder, which makes it more like the GS/OS System Folder. Like the System folder on a IIgs GS/OS boot disk, the Mac System Folder was intended to contain most of the system software core and enhancements such as desk accessories, initialization files, drivers, and so on.

Unlike GS/OS (and ProDOS 16 before it), the Mac System Folder did not try to group related items within subdirectories; every enhancement was dropped into the same single folder. For power users, this resulted in a System Folder so overloaded with files that locating a specific file was like locating a needle in a haystack.

System 7 solves this by grouping related files into functional folders within the System Folder; the folders identify Enhancements (programs that add features to the Macintosh environment), Apple Menu Items (Desk Accessories or other items that will appear in the Apple Menu listing), Control Panels (or CDEVs), Startup items (initialization files or programs to be executed when the system is started), Preferences (a place for programs to store custom information), and Help (to store help files). IIgs owners will recognize some of these folders as correlating roughly to the organization of the GS/OS System folder; apparently the Mac had to learn a few things from the IIgs.

The System Folder also includes a System file that contains most of the core of System 7. Like the previous Mac operating systems, the System file contains system fonts and sounds (Desk Accessories have been moved to the Apple Menu Items folder). Unlike previous systems, the System file in System 7 can be "opened" to reveal the sounds and fonts it contains, and these resources can be copied in or out of the System file as if it were another folder.

Most of the improvements in the new organization affect the installation of and access to system software features. Mac users now no longer have to endure the use of a separate "installer" program (Font/DA Mover) to add fonts or desk accessories to their System; but that's an ordeal IIgs users have never had to endure. Another enhancement in System 7 is that when you drop files into the System Folder, the Macintosh Finder will try to sort out where to put them and drop them in the correct "subfolders" for you (after getting your approval).

There are also some improvements over the way the current IIgs Finder environment works. Some actions are now more intuitive, such as clicking a header category (such as "Size") in a Finder window listing to sort the list by that category.

Both the IIgs and the older Mac desktop interface used a special Control Panel desk accessory to select certain system functions and configurations. Under System 7 you can now access a Control Panel device by clicking on it directly rather than having to first open the Control Panel itself. System 7 doesn't need a Control Panel desk accessory because it allows multiple applications, including the Finder itself, to be executed and coexist in memory at one time. This effectively makes every program a desk accessory to every other program.

Under System 7, a new mechanism allows you to create an alias for a file (a special copy of the original file's icon) that relays messages to the original file when acted upon. To add a "Control Panel" item to the Apple menu, you create an alias for the Control Panel folder and move the alias to the Apple Menu Items folder (actually, System 7 comes with this already done for you). When you select "Control Panel" from the Apple menu, you are automatically switched to Finder (if you're within another application) and the Control Panel folder is opened to display its contents.

Aliases also allow the Mac to emulate a feature of the IIgs Finder. On the IIgs, you can drag an application out of its folder onto the desktop, but the original program filename still resides in the original directory and the program can use that directory path to locate its files. On the Mac (which uses a different directory mechanism), a program on the desktop is presumed to reside in the volume directory. Many Mac programs can't find their auxiliary files, which are still in the subdirectory. To make sure the Mac application can find its other files, you can now create an alias of the main program file and drag the alias onto the desktop; double-clicking it causes the same action as clicking the main program file, and the program runs from within its folder. You can even add an application to the Apple menu by dragging its alias into the Apple Menu Items folder, or you can cause the application to automatically launch on startup by putting the alias into the Startup Items folder.

The use of aliases isn't confined to the Finder; they appear in file dialogs and other locations like "normal" files and can be used in the same way.

The other major Finder enhancement is the accommodation of the file hierarchy of a hard disk. The original Finder was very awkward with a hard disk because each folder had to display its contents in a separate window. Under System 7, when listing the contents of a folder by Name, Size, Kind, or Date (options other than the Icon or Small Icon views) a small triangle icon to the left of each folder points to the folder's name. If you click on the triangle, it rotates to point downward and the files within that folder are displayed in the same window, indented beneath the enclosing folder. You can repeat this for folders within folders, extending the display to show the entire hierarchy for the folder (or volume) in a single window. Best of all, you can select files from different levels of the hierarchy at one time; no more opening multiple windows to copy several files from different locations on a disk.

The portions of these features that extend beyond their IIgs counterparts would be welcome in the IIgs System Software if feasible. Our favorites are the alias concept and the hierarchical folder display; these changes make the Desktop more functional for hard disk users.

However, the lack of a MultiFinder for the IIgs may make enhancements such as the new Control Panel implementation difficult to implement (maybe the IIgs wizards at Apple will think of other, possibly better, mechanisms). The ability to drop an item into the System Folder and have it automatically directed to the correct subfolder would also be a nice Finder enhancement. But realize that these changes incurred a heavy penalty on the Mac: Apple recommends at least two megabytes of memory and a hard disk to run System 7. Our own experience is that almost nothing but the Finder can fit in a two meg Mac. My System file, which includes several extra fonts and extensions we use for desktop publishing, takes up 2.25 megabytes when loaded into memory. We've upgraded the Macs we have to a minimum of four megabytes of memory.

Another interesting feature is virtual memory. On a Macintosh equipped with a 68030 processor (current models are the Mac SE/30, IIci, IIci, and IIfx) or a system enhanced with a PMMU (paged memory management unit), it is possible to allocate memory from a hard disk to act as if it were extended (albeit slower) RAM memory for Macintosh programs. Since System 7 now supports memory sizes greater than 8 megabytes, virtual memory is a practical way to simulate large amounts of RAM with cheap hard disk space until you can afford to buy more RAM. Whether such a feature could be added to the IIgs is also unknown to us but we anticipate it would be difficult since there is no hardware memory management unit for the IIgs. (Apple's direction toward multimedia makes more RAM attractive; sound and picture files eat up a lot of memory quickly.)-DJD

A Mac as Apple II peripheral

At least one of System 7's features actually benefits Apple IIgs users who work in a multiple-computer environment. Apple has added what amounts to AppleShare to every Macintosh (see "AppleShare and the Apple II", September 1989, pp. 5.59-62). "Personal AppleShare" does not support the printer server or Apple II startup options of a dedicated server and has a practical limit of 5 or 6 users, but it also does not require that a Mac be exclusively dedicated for use as a server. It means, for example, that if you have both a IIgs and a Mac in your home or office, you can now easily connect the two so that they can access the same files on the Mac's hard disk.

To do this you need "network connectors" for each machine and some telephone wire to hook the connectors

together. Apple's LocalTalk connectors are quite expensive, but alternatives are available from a variety of sources, including our own catalog. The connectors plug into either the printer or modem port on the back of your computers. On the IIgs you have to install the GS/OS Appleshare software (use the Installer from your system disks) and you have to turn on AppleTalk in your control panel. On ROM 1 machines this will use up two slots (7 and 1 or 2). On ROM 3 machines you lose only the slot related to the port you plugged the connector into (1 or 2).

On the Mac end, file sharing under System 7 is enabled by highlighting a folder and selecting "Sharing..." from the "File" menu. A dialog box appears similar to those used for setting Appleshare file access attributes from a IIgs or on a Mac AppleShare workstation (System 7's "Sharing..." replaces the "Get Privileges" option of earlier versions). From the dialog you can enable the options you want, including an option to give any new folders created within the shared folder the same attributes as the one they're in (on an AppleShare server, new folders are always initially "private" to the creator).

Next, you have to enable the use of your Macintosh as a server. Opening the "Sharing Setup" control panel enables you to enter your own name and password and a "Macintosh Name" (this corresponds to a server name when another workstation polls the network). Two buttons allow you to select whether "File Sharing" or "Program Sharing" are active or inactive. Your user name also becomes an identification you can use to access your Macintosh hard disk remotely from a workstation with all privileges.

File sharing is the familiar AppleShare concept where the contents of volumes and folders can be accessed by others on the network, limited by the access privileges assigned to the folder or volume by its owner. Even though the shared item may be a folder on your Mac hard disk (it can also be an entire disk volume, though CD-ROM volumes do not appear to work), it will appear as a "server volume" to a network workstation. You can designate up to eight shared folders and volumes for your "server"; all folders within the shared item will appear as folders on the "server volume".

Program sharing is a new capability. Programs within the hierarchy of the shared folder will be available to other users based on the accesses set for the network. You can also designate a launchable application as "shared" (using the same "File" menu option) to allow other users on the network to launch and use it. Such programs should be written to expect simultaneous use by several individuals; such use may also be constrained by the use license for the program in question (most programs are distributed with at least a minimum restriction that only one copy of the purchased program is to be in use at any time).

The server metaphor extends to a "Users & Groups" control panel that allows creating a "New User" or "New Group". These options appear in the "File" when you open the CDEV and a window displaying icons for the groupings appears.

Selecting "New User" causes a "New User" icon to appear in the window, which can then be renamed to the user name you desire. Opening the icon brings up a dialog where user options can be entered. You can enter the user's password (and enable their ability to alter it) and enable their ability to connect. There is also a list in the window where the user's group assignments can be viewed, and a checkbox to enable or disable program linking for the user.

Creating a "New Group" brings up an icon that can be renamed to signify a grouping of users. To assign users to

the named group, drop their user icon into the group icon. Opening a group icon displays a window with the icons for the members of the group.

There is also a "File Sharing Monitor" control panel that will display connected users and the total activity; if you want to temporarily "bump" a user from your system, you can highlight their name in the monitor list and click a "Disconnect" button. To keep them off, you'll need to disable their access to your "server".

Like other Mac files, users and groups can be completely deleted by dragging their icons into the Trash icon and selecting "Empty Trash" from the Finder's "Special" menu (the System 7 Trash can must always be emptied manually).

The reason Personal AppleShare is so significant to Apple II users is that it provides a simple, inexpensive network environment for users of multiple systems. A Mac Classic with two megabytes of RAM and a 40 megabyte hard disk (suggested retail under \$1500) and System 7 software can become a network server; you no longer need to purchase a separate Macintosh and expensive server software, all you need is the appropriate network cabling. You can also have use of the Macintosh with two minor annoyances; some of the Mac's performance will be absorbed in server duties, and a workstation will lose the server connection if a program crashes the "server" Mac in an unrecoverable manner.

Practical limitations of such a server are the inability to configure the Personal AppleShare "server" as an Apple II boot volume or as a print server. Given that we've had a network for some time and long ago stopped trying to boot over the network - we use our network primarily to allow us to get at the same files from machines of different types in different rooms - neither of these omissions has been problematical. One bug has also been discovered: copying a file to an Apple II results in an incorrect auxiliary type due to a bug in the Personal AppleShare software. -DJD

The Apple II as Mac peripheral

Apple has also completed the announced Apple IIe Card that contains Apple II hardware and firmware on a card that fits within the Macintosh LC.

The \$199 Apple IIe Card can only be used in the Mac LC; our system used the new (512 by 384 resolution) color monitor. The IIe Card occupies the Mac LC's single 020 Direct Slot. Instructions for installation are not provided (installation is intended to be performed by a dealer) but basically it's a matter of removing an insert at the left rear of the Mac LC to provide access to a connector on the IIe Card and inserting the card into the 020 Direct Slot connector along the left edge of the LC motherboard.

Also provided for installation is a Y-shaped cable with three connectors. One attaches to a connector on the back of the IIe Card, it splits into a 19-pin connector for attachment of Apple II disk drives, and a 9-pin "game" connector similar to that on the back of a real IIe.

A Macintosh disk is provided that includes startup software. To launch into IIe mode, you double-click the IIe application from the Mac Finder. Without a IIe disk inserted you will find yourself sitting at a facsimile of the IIe power-up screen (with "Apple //e" at the top) and, after a pause while the disk drives are "scanned", the Applesoft prompt ("J") will appear. If a bootable disk is present in a boot volume, it will be used to start up the virtual IIe.

You configure the IIe Card through the use of a control panel entered by the same control-open-apple-escape sequence used to enter the Classic Control Panel on the IIgs. The screen that pops up looks like the IIgs or (pre-System 7)

Macintosh Desktop Control Panel; a series of icons along the left side symbolize various aspects of the card's environment that can be configured: general defaults, SmartPort (3.5 drive assignments), slots, network printer, memory card allocation (from the Mac's available RAM), and so on.

General setup. The IIe Card can be operated at one of two speeds: "Normal" (one megahertz; typical of a standard IIe) and "Fast" (two megahertz; twice as fast as a normal IIe but slower than most accelerated IIe systems). An actual change in speed will only occur when the IIe is "restarted" via a button option in the control panel.

Other options which can be set are the system beep sound (one of the Mac beeps, or a provided "Apple IIe Beep"), keyboard delay (before key repeat), key repeat rate, activation of a type-ahead buffer, selection of color or monochrome display modes (the manual is careful to point out color is only available if you have a color monitor and the use of color is also enabled in the Mac's Control Panel), and the use of Normal or Inverse characters.

Buttons at the bottom of the Control Panel allow you to eject a disk from the internal Mac floppy drive (or drives), request help on the current Control Panel device settings, quit the IIe (back to the Mac environment), restart (cold start) the IIe, or continue with the current (IIe) program.

More RAM, please. As provided, the card is designed to appear in the standard IIe configuration with 128K memory (64K of "main" memory, and 64K of "auxiliary" memory). One "General" option that is available is the allocation of a second bank of 64K "auxiliary" memory following the protocol originated by Applied Engineering's RamWorks expansion card. If you enable this option, you double the amount of auxiliary memory, but we see no real sense in this since the amount is not sufficient for any real purpose.

The better way to proceed is to instead enable the use of a virtual Apple Memory Expansion Card, which is assigned to slot 7 by default. You can allocate up to one megabyte of memory to this virtual card and use it just as you would a memory card in a IIe. One megabyte may not satisfy some "power" IIe users, but it is more than enough to do credible work.

If you do enable the use of the "slot-based" memory card, you will need to disable the use of the extra 64K "auxiliary slot" memory expansion or AppleWorks 3.0 will not use the "slot-based" memory.

What's this talk of "slots"? In the IIe Card Control Panel, there is an option for slot configuration that allows you to mix and match devices from those already installed and a few "spares" provided. As supplied, the configuration is:

Slot 1	<empty>
Slot 2	clock
Slot 3	80-column card
Slot 4	mouse
Slot 5	SmartPort (3.5 disks)
Slot 6	Disk 5.25 controller
Slot 7	Apple Memory Expansion Card

The spare devices are a modem port, printer port, and network printer.

You can re-assign slots by dragging the device of your choice to the slot of your desire, either from another slot or from the "spares" stored in an array on the lower half of the screen. If the destination slot is already occupied, dragging a new device into it will cause the two devices to exchange places (saving the extra step of removing the first device). Unlike a real IIe, but like the IIgs, the desired startup slot can

also be set.

Software compatibility does seem to be very good to excellent. Copy-protected 3.5 disks designed to expect a UniDisk 3.5 didn't operate on the internal Mac 3.5 (which does work for unprotected disks), but did work on an external UniDisk 3.5.

Most 5.25 disk-based copy-protected programs worked on an Apple 5.25 attached to the external connector; two exceptions out of a series we tried were Sirius Software's Bandits and Broderbund Software's AE which use complicated protection techniques. All of the "problem" programs (except the 3.5 software expecting the UniDisk) worked fine on a IIgs using the same 5.25 drive.

Some communications programs had problems with the modem port. Proterm v2.2 managed well, Applied Engineering's ReadyLink lost characters as if experiencing a buffer overrun, and America Online didn't seem to be able to cope with the serial port at all.

Some problems that crop up may remain obscure. Most of us know that the preferred interleave for formatting a 3.5 disk for a IIe (even with a Universal Disk Controller) or IIc is four to one (for the IIgs and an Apple 3.5 drive, it's two to one). Yet the internal drive on the Mac *always* formats a diskette to a two to one interleave. If students are moving 3.5 disks from one system to another, they may take a performance hit when using the two to one disks on UniDisk 3.5 drives.

And for you old-timers: yes, AppleVision did run.

CPU performance was generally on a par with that of a IIgs, with one salient exception. Comparing the IIe Card at 1.0 and 2.0 MHz with the IIgs at 1.0 and 2.8 MHz respectively. Given Tom Smith's comments regarding the nature of benchmarks ("Apples and oranges", March 1991, pp. 7.12-15) we paid particular attention to some of the subsystems, such as (3.5) floppy access and video speed.

We used a program that wrote and read back a 64K text file, wrote 64K of text to the 40- and 80-column text display, and filled the high-resolution graphics display line-by line (proceeding from top to bottom) ten times. Times were roughly comparable until it came to video performance; the IIgs at "fast" speed took 50 and 85 seconds to write 64K of text to the 40- and 80-column screen respectively versus 99 and 189 seconds for the IIe Card at 2.0 MHz, and the IIgs took 24 seconds to complete the graphics benchmark versus 39 for the IIe Card. Given that educational use of Apple II systems is often heavily graphics based, the penalty in text and graphics display could be noticeable in normal use.

What constitutes "no compromise"? When John Sculley first revealed plans for this card last spring, the operative phrase in his characterization was that the card would represent a "no compromise" Apple II. Obviously, this card is being offered to try and appease schools and IIe owners in an attempt to get them to accept a Mac platform with IIe emulation as the "next step". So how does the card measure up against the competition?

We perceive the competition to be the Apple IIe (although the IIc serves many well, the slot concept of the IIe Card seems intended more to favor comparison with the IIe), the Diamond TrackStar-E (see "Running with the enemy", January 1991, pp. 6.93-95) in a PC-compatible host (a combination being proffered to some schools), and the competition Apple seems to fear the most: the IIgs. At a "complete environment" level, the Mac LC in combination with the IIe Card would have to be judged against the latter two systems in terms of upgrade paths.

We would classify "no compromise" to mean that the IIe Card is expected to run all software that a IIe could be expected to run, use all common peripherals that a IIe can

use, and perform at least as well as a IIe.

The biggest compromise is with the slot configuration options. They are not as flexible as a IIe, and you may notice obvious peripherals such as a hard disk are not supported (yet; Apple included a note indicating support for AppleShare file servers is being worked on). Of the three peripheral interfaces Apple has announced for the Apple II in the last three years (Apple II WorkStation Card, Apple High Speed SCSI Card, Apple Video Overlay Card), not one is supported on the IIe Card. If these cards are considered valuable to the Apple II community, why is Apple foisting off an incomplete implementation of a IIe on customers as "no compromise"?

I decided I wanted to add a printer (our network LaserWriter, using the ImageWriter emulation) to slot 1; no problem. When I decided I needed the modem port in slot 2 I decided I would move the clock. After determining that the 5.25 drive was the most expendable option (I hardly use one these days), I drug the clock to slot 6; I was told it couldn't be put there (this was never a problem on my IIe). So I decided the slot 7 RAM card was expendable; I couldn't put the clock there, either. So I ditched the mouse and put the clock in slot 4. I shudder to think where the hard disk or server volume is going to go when Apple releases the appropriate support.

Comparing systems. Given that the IIe Card also requires the Mac LC, something has to be said about this combination versus the two alternatives: a IIgs that emulates a IIe but has Mac-like features as well as some of its own, and the Diamond TrackStar that operates within various PC compatible hosts.

In terms of Apple II compatibility, the IIgs is the best option. Some of the "limitations" of the IIgs are an artifact of the care taken to preserve compatibility, and users appear willing to deal with those minor limitations. The IIe Card's software emulation is close, but the slot configuration is considerably more restrictive (on the IIgs, you can use the internal ports or the slots; surely the best of both worlds).

The TrackStar has a few disadvantages versus the Apple IIe Card. It does not support Apple's 3.5 drive formats, and its software compatibility, while very good, is not quite as good as the IIe Card. Its price is over double that of the IIe Card. However, it does support the use of hard disk space (including network volumes), and it works in a host that can be considerably cheaper than the Mac LC. In fact, you can select a range of hosts, from a basic PC to an 80x86 monster.

Regarding the hosts themselves, that comparison is tougher. Apple has funded a study of productivity of their Mac models versus "comparable" MS-DOS systems; the results favor Apple. But not all customers buy first (IBM, Compaq) or even second-tier PC compatibles. Many will buy consumer-priced models at substantial discounts, and we have not seen a price/performance study from Apple for those circumstances.

As a Mac, the LC is my *least* favorite of the three new models (Classic, LC, and IIci). The LC costs considerably more than the Classic but does not have correspondingly better performance. It also lacks features that make the IIci attractive: speed (the LC is noticeably slower), memory expansion (10 megabytes for the LC versus 17 for the IIci), and the presence of a 68030 processor (availability of virtual memory under System 7). My advice generally has been that, if you're going to buy one of the new Macs, buy a IIci if you can. If you can't, buy a Classic and wait for the price on IIci performance to fall (as many Mac prices have). If you drop the extra \$1500 for a Mac LC, you may not have enough money to take the real plunge in a year or two.

Another major issue is one of confidence in the com-



pany, which we have beaten to death elsewhere. The most pertinent question is whether an Apple II customer will see the Mac LC with IIe Card as representing a logical progression of Apple's technology (the "Swiss Army Knife" approach), or an investment in "new" technology that may have been better spent in making IIgs systems more attractive and cost-competitive for schools.

In our opinion the IIe Card represents a superior implementation of an Apple II emulation designed to go into a less than optimal CPU proffered by a company with less than exemplary support for its Apple II customers. The combination results in something that is more than a separate IIe or a Mac, but for which each of the individual components leaves something to be desired in price or performance.

It is also a combination from a company that has exhibited no real product support for the Apple II series in recent memory, but that felt "obliged" to supply Apple II compatibility to make its Mac products more attractive. Schizophrenia as a marketing direction does not imbue great faith.

Should Apple do something dramatically visible to alter the equation, the outlook may change. But given the limitations of the LC as a host, the erratic commitment of the parent company to support its installed base of users, and the availability of a competitive solution that may be adequate for many users, there are problems in supporting the IIe Card as a "solution" for current Apple II owners.-DJD

The electronic frontier

One of my favorite sayings was immortalized in the movie *The Adventures of Buckaroo Banzai*: "No matter where you go, there you are". When I went on my normal Labor Day vacation at the World Science Fiction Convention (WorldCon), this year held in Chicago, sure enough, there I was.

The serendipity is that several of the science panels centered around computers. That in itself wasn't particularly noteworthy (computers are the hot topic of today's technology), but many of the computer topics were not about the technology itself. Instead they dealt with the debate over privacy, computer crimes, and law enforcement search and seizure practices.

I've tried to stay clear of this issue for some time because it catches me between two worlds. I used to work as forensic chemist; someone who tested evidence and testified in legal proceedings. As such I participated in law enforcement investigations and search and seizure in the interest of protecting the public. It's very hard for me not to sympathize with the investigative problems that law enforcement agencies have to solve in order to track and catch someone who can cover their tracks by encrypting a file or erasing a disk.

Then again, I'm also a computer user who's concerned about the protection of individual rights (including mine). I am not a lawyer, but current debate seems to indicate that the relevance of our Electronic Communications Privacy Act of 1986 and other protective measures to computer communications are not universally clear here in the U.S.

In this country, issues of the protection to be afforded computer bulletin board systems and networks are still being defended in the courts. There are currently three available communications models which can be used to decide how to treat computer network communications.

Common carriers are services that facilitate the "transportation" of messages. The most familiar example is our phone service. These services do not attempt "prior re-

straint" of the content of messages. Communications that use these mediums are considered private and secure.

Publications, such as newspapers, operate under some general limitations regarding unacceptable content, such as obscenity and libelous statements. But a publication's general right to print and distribute without prior restraint is guaranteed by the First Amendment.

Broadcast media, such as television and radio stations, are regulated under more stringent conditions of content. You don't see the range of material appearing on a local television broadcast that you do on a cable movie channel, for example, because the network has to cater to a more selective code of "public decency".

As you look through these models you see the constraints become greater as the effort of access decreases. In other words, the more public the forum the more likelihood there is of constraint. Usually we communicate over the phone on a personal (one-to-one) basis or in small conference calls. Magazines and newspapers play to a wider audience. Broadcast television and radio play to anyone within the visual or auditory range of a receiver.

Whether or not you agree that the various models, or the relative constraints on them, represent reasonable stratifications, these models are what computer-network litigation will be drawing on until new laws catch up. And, as often happens with technology, the laws aren't catching up fast enough.

Looking at it from a knowledgeable user's standpoint, computer networks bridge all three models. And since computer networks are also interactive, they have unique situations.

Electronic mail (private mail sent between individuals or small groups of users) resembles a common carrier model. Participating individuals have a reasonable belief that they are communicating privately with one another. Ideally, electronic mail should not be purposefully reviewed by anyone except the correspondents. The Electronic Communications Privacy Act delineates this type of protection for common carrier mediums such as phone conversations.

It isn't quite that cut and dried for the home computer owner operating an electronic mail system. After all, the owner does generally have the ability to monitor the mail. Some software may make it difficult to avoid seeing mail items inadvertently, since reading items without warning users that their "private" mail may be read would be as unethical as a switchboard operator clandestinely monitoring a phone conversation.

It is not automatic that the current legal system will assert that someone's wholly owned computer bulletin board system running over their home phone line qualifies as a "common carrier". Until legal protection is specifically afforded to such systems, whether or not they are connected to a broader network, law enforcement officials may decide to consider the contents of the system your property, under your control, and hold you responsible for the contents of the system.

With such an interpretation, can the sysop be held accountable for the use of the private mail system in the commission of a crime? Most computer users, trusting that a system administrator would not routinely commit the ethical transgression of reading private messages, would say "no". But law enforcement officials, seeing the system sitting within obvious control of the owner, may feel that the administrator is responsible for *all* of the system's contents. The right of officials to confiscate and examine a sysop's system requires an interpretation of the Fourth Amendment of the United States Constitution as it pertains to search and seizure practices.



Another problem is the responsibility for the content of publicly accessible network areas. Public areas logically follow the publication and broadcast models, but with a degree of control limited by which model you assume. The extent to which the First Amendment to the Constitution protects "free speech" in this context is being debated.

Most systems have a public "bulletin board" area where various users can post messages. Usually these messages are automatically posted for viewing without human interaction. Indeed, on larger networks it is inconceivable that all messages could be "screened" before posting (this same argument could be added to the arguments against screening electronic mail).

Imagine a large bulletin board out in front of a grocery store where anyone can walk up and post a message. Now imagine thousands of messages being posted each day. Then imagine the owner of the store being held accountable for the contents of each and every message.

The problem is usually managed by reviewing the message base periodically and removing messages deemed to contain offensive content. Normally the policy of the host network's administrators determines what constitutes an "offensive" message; this policy is often (but possibly not solely) based on the same criteria used by publications or broadcast media.

But there are opposing interpretations. Some users consider themselves to be the "publishers" of their own message and therefore responsible for its content and eligible to protection as the right to free speech (these users consider the system to be a "common carrier"). On the other hand, since the network is the distribution medium, some say the system administration is accountable for "offensive" messages found on the system. As an additional twist, even if the administrator deletes the offending message at the first opportunity, some may argue that even the brief presence of the message on the system is an offense.

File download areas also seem to fall into the broadcast or publication models. Most larger networks maintain their file areas in such a way that files placed on the system by users are not immediately available for general access. Instead the file is put into a private "holding" area where the administration can examine the file before determining if it is suitable for general release. If not, the file can be deleted before numerous users have a chance to see it.

For example, when we started our association with GEnie, we decided to adopt a publication model for the bulletin board systems and file areas we manage. While we don't "edit" the contents of GEnie as closely as we do our publications, we do occasionally delete messages and refuse to release files that don't meet our editorial standards. We have no control over, or access to private mail, which remains **private**, unless you send it to us. In that case, we react as if it came to us on paper - letters received on GEnie are used in **A2-Central**. But just as with our written mail (which we've made clear we like to use in print), we don't disclose information that seems intended to remain private. (Some readers even mark passages that they want kept private.)

Until our legislators and courts learn to cope with the new technology, system administrators and users are in limbo. Users aren't going to be able to be completely sure that their electronic mail messages are indisputably private if the possibility exists that the storage medium containing them can be seized and searched en masse. Administrators can't be completely sure of their liability for the contents of their system, or their ability (or even responsibility) to review and control those contents.

There are legitimate needs for law enforcement officers to have the ability to monitor certain aspects of the networks. Crimes that can be conducted over a network, such as the duplication and transmission of proprietary materials ("information theft", for lack of a better phrase) and breaking into other systems (the computer equivalent of burglary), do occur and have to be dealt with.

"Information theft" may be broader than first realized. The first thought may be of copyrighted programs or database files illegally being distributed. But with today's sophisticated systems, pictures and sound can also be digitized and reconstituted with little loss in quality. Michael Whelan, multiple winner of Hugo awards as Best Science Fiction Artist, related at one WorldCon panel how he discovered a copy of his artwork (which had been digitized and retouched) on a network. The accountability for blame also has to be decided: should the host system have known better than to release the file (even if it is an altered copy of the original) or is the uploader solely responsible? In terms of copyright, it is possible to be in violation unknowingly, even when the assignment of responsibility affects the assignment of penalties?

Difficult questions are also arising as to what qualifies as the "fair use" of snippets of art and sound within the expanding field of hypermedia, just as the sampling of commercial music for use in other songs has become a point of litigation in the recorded music industry. And eventually digitized video segments are going to be part of the argument.

Entering someone else's system without invitation is another hot arguing point. A few years ago, "hacking" into a remote system and exploring it was considered an educational experience by some yet often an irritation by the "host". Given the number of computer systems in use today the irritation factor is winning; even if the unauthorized entry is "harmless", the expense of identifying the "harmlessness" of an intruder is no longer something that businesses can expect to bear, and you can expect laws to further discourage uninvited entry.

Will encryption save private mail? Maybe not; subscriber Robert Benson of Toledo, Ohio wrote to mention U.S. Senate Bill S266, which would ask that electronic encryption vendors make decoders available to the government to facilitate searching encrypted files. This sounds suspiciously close to requiring anyone using scrambling circuitry on their phone to supply a duplicate of the scrambler to the government "just in case" they need to tap your phone line. Of course, legal wiretaps require a court order justified by reasonable cause, along the lines of a search warrant.

Encryption also has problems related to the international nature of computer networks. Some types of encryption (specifically DES) are considered protected technology that cannot be exported to certain areas of the world and so should not be freely distributed on international networks.

What we need is a good working set of rules for the new "cyberspace" medium that computers are generating. Computers transmit data that can represent text, pictures, programs, and other entities. Some delineation of this cyberspace model will have to emerge that protects innocent administrators who are trying to keep up with a flood of information passing through their systems and that allows users to have some knowledge of how their contributions will be treated as they pass through the network. So far, it isn't clear that the U.S. legal justice system has a strong handle on the finer points.

Consider the well publicized case of Steve Jackson Games,



Steve Jackson is a game designer who had his office computer systems and other materials confiscated by the Secret Service and held for several months. During the interim Steve Jackson suffered severe hardship trying to maintain his business. The confiscation was apparently conducted on the basis of the alleged involvement of one of Jackson's employees with the possession of a copy of Phrack (an electronically distributed publication) that contained information purported (by the investigators) to have been improperly obtained from a BellSouth computer.

The ringing questions are whether such a large-scale seizure was legitimate under the Fourth Amendment, and whether First Amendment rights should protect the contents of the confiscated files. A suit was filed in May of this year against the Secret Service and others in regard to the incident. Supporting the suit is the Electronic Frontier Foundation (EFF), a nonprofit organization that desires to better define these questions by establishing the necessary legal precedents.

The EFF was established in 1990 to promote the development of computer-based communications; its goals include trying to encourage the free and open use of computer communications. Part of that involves supporting reasonable mechanisms to prevent computer crime, but it also involves ensuring that civil rights issues are properly grafted into the dominion of the new technology. Among the forces behind the EFF are Mitch Kapor (founder of Lotus Development Corporation, the Lotus 1-2-3 folks) and Steve Wozniak (principle designer of the Apple II and co-founder of Apple Computer).

If you are already using a modem to communicate with others, you probably can see the applicability of these issues. Many of us communicate electronically on a daily basis and want to be relatively confident of the nature of privacy and responsibility assigned to our communications.

Even if you don't use a modem yet, there is a high likelihood that you may in the future. The cost of using commercial services has been declining in recent years, and as home systems become more common the number of systems linked through personal systems like ProLine (for the Apple II) or FidoNet (for PC compatibles) will increase. Such networks already transcend continents.

If you are interested in finding out about the issues, pick up the September 1991 Scientific American Special Issue on "Communications, Computers, and Networks" which contains a pertinent suite of articles under the title of "Computers, Networks, and Public Policy".

You can reach the Electronic Frontier Foundation at 155 Second St., Cambridge, Mass. 02141, 617-864-0665 or FAX 617-864-0866. You may find copies of their electronically distributed newsletter on any networks you frequent.

Also keep an eye out for pending legislation regarding personal computers and the information networks and forward your opinions to your legislators. Participation in the extension of basic rights to the electronic world is necessary to ensure that those less well-versed in the medium or less well-intentioned about its accessibility will not be the ones to decide its future.-DJD

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The Nibbler Speaks



□ Ewen was incorrect in his Chairman's corner in the December magazine. PC Access is not a feature of System 7.0.1 for the Mac. It may of course appear in future 7 versions, we shall just have to wait and see. According to Apple System 7.0.1 has only been issued for the PowerBooks and the Quadra. Apple are not issuing it as an upgrade, though there do appear to be some bug fixes to the Basic 7 in it. If you get hold of a copy it is quite safe to use on all machines. Having charged you for the privilege of using System 7.0 in the first place, they now have problems about how they should issue any upgrades! If they charge the full price no one will buy them. If they charge less than the full price those already owing a copy will feel cheated. There are no serial numbers on the disks to check who owns what!

□ For those of you subscribing to the GS Xtras disks, we have an apology to anyone who tried to boot the December disk. There should of course have been a nice title picture and not a blank screen after booting. The picture file was accidentally saved as the wrong picture type. When it was loaded, it overwrote the palettes, leaving a blank screen. We shall make sure that does not happen again in future issues!

□ This is just a reminder that all the disk libraries are now catalogued on disk. The Apple II libraries are now listed on three disks. A 5.25 inch DOS 3.3 disk for the Apple II+, a 5.25 inch ProDOS disk for the //e and //c, and a 3.5 GS/OS disk for the IIgs. The Macintosh library is issued as a HyperCard stack. There are two versions of this stack, one for HyperCard 1.0 and one for HyperCard 2.0. Make sure you indicate the correct one when ordering. All the Apple II disks included file viewing/printing routines and all disks are available, price £2, from PO Box 3, Liverpool, L21 8PY.

□ TABBS is now settling down after the all recent changes that Ewen has installed. Apologies to all those who have suffered through this period. Some messages were lost just after the changeover to the new TABBS software, and due to exhaustive work on the hard drives, TABBS has been offline at frequent intervals. Ewen plans an overhaul of the menus sometime soon. He will be keeping the same menu structure, but will remove unused message areas and bring in new features to enhance the system overall.

The library storage capacity has increased by a whopping 200mb, making way for lots of new libraries. The complete set of Mac technical notes is now available for downloading for instance.

I gather that adding a third hard drive proved quite a problem. You may have seen some of this saga reported here in past Nibbler articles. Ewen reports that he tried once before and failed to add a drive. He was told that you could not have more than two drives on an XT clone amongst other misleading advice. The answer to all the problems



turned out to be a Future Domain SCSI card and Digital Research DOS 5.0. MS-DOS, even MS-DOS 5.0, just could not cope with one SCSI drive, two MFM drives, a tape streamer and a floppy drive! DR-DOS is also at least a megabyte smaller and runs twice the speed of MS-DOS 5.0!

□ Those of you who have been with Apple2000 for some time may remember that we once had BASUG pages on the Prestel Micronet service. Phil Faber helped us with editing those pages in those days gone past.

We ran into Phil at the Mac User show and were brought up to date with his current activities. Phil now runs a rapidly expanding Public Access Viewdata and Text service called SpeedLink. This is a message and information service with many specialist areas. Phil says he would like to see a strong Apple area grow on the system in due course. If you are interested in SpeedLink, give it a call on (081) 544 0155. You will need a Viewdata emulation program such as Data Highway or Antelope on the Apple II, a copy of Gazelle on the //e, //c or IIgs, Pretzel or Vicom on the Mac. SpeedLink operates at any speed up to 2400 baud. See the panel on the right for further details.

□ We recently had a request for details of how to connect an ImageWriter to an MS-DOS computer. Well the ImageWriter is an Apple product and so we were able to tell him about the cable, but as to a driver to run under MS-DOS I ask you! We finally came up with a company in Maidenhead who should be able to supply a suitable driver for the ImageWriter on an MS-DOS machine. If you have this problem, try calling E.S.P. in Maidenhead on 0628 23453.

□ This leads me on to a related problem. There has been much about transferring files from Apple II disks to MS-DOS computers in the magazine of late. I can only suppose that these people have deserted the Apple community because of the high prices of the Macintosh range even after the recent price drops.

Ian Grant has worked out a way to transfer WordStar files quickly to MS-DOS computers. If you need help on this kind of transfer, contact Ian C. Grant, # The Beech, ~~Greenwood, Garsdale, Cumbria, LA10 5LA~~

□ Old hands on TABBS may remember John Kishimoto and his invaluable contributions to the message areas. John will also be remembered for his articles in the Apple2000 magazine as well. John is now in Vancouver working at the University of British Columbia. His office is filled with IBM computers, and only one Mac! He is however on Internet, and if you would like to contact him, and have access to Internet, call:

koichi@unixg.ubc.ca — preferred address
koichi@mech.ubc.ca — secondary address

□ Many of you I know are using CIM on the Mac to connect to Compuserve after seeing Ewen's article last year. CIM has just been upgraded and now stands at version 1.6. Improvements include many more network connections. The scripts for these are now external to CIM so you can edit and fine tune them if needed.

CIM will now search for Library Files in all library sections. This is now needed due to the recent change in Forum library structure.

There are a host of other bug fixes and added features to the program. Many of these changes are of course to make a powerful program even more powerful, but some of the changes help you navigate your way more smoothly around

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Merton Park, London, SW19 3JY

the Compuserve Forums.

Registered users of CIM may download the update free from CIS. Go to the CIM support forum for further details.

□ There is another program designed specifically to access Compuserve. This works in a quite different way to CIM. It is really designed as an automatic and remote collector of files and messages. Navigator logs on and scans predetermined Forums for new messages and files. It logs out and then you select those that you are interested in. A second access retrieves the messages and files for you.

Navigator has also gone through a recent upgrade as well. Navigator is not a Compuserve product though you can order a copy on-line. Go NAVSUPPORT for details.

□ It is extraordinary to think that the Macintosh was only released eight years ago. What a long way it has come since then. There have been nearly twenty different models in that time.

The Apple II was launched 15 years ago, saw only four models and is still selling today. It has a wide and dedicated following even now. The reason is simple of course. It does enough to satisfy many. They do not want a super fast amazing machine. They only want to do a few things simply and quickly. Most importantly they can make the machine do the things they want. The Mac is just too complicated for its own good. You cannot sit down and plug things in and out, tinker with the software, and expect it to work at the end of it.

Why cannot Apple realise that both computers are needed. The market is wide and both computers span the wide range of applications that await a computer solution.

Enough of my hobby horse. The AGM is a-coming. A time to meet all those old friends ...

The Nibbler



MacLine

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081 642 2222

⑦ means works with System 7.0
no symbol simply means unknown at this time

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Microsoft Word 5	(feature and function laden WP)	£215.00
Nisus 3.0	(hot WP with graphics, GRePS, macro language)	£215.00
Nisus Compact	(special version for PowerBooks)	£89.00
Taste	(low cost alternative in a crowded WP market)	£95.00
Vantage	(full featured DA great at converting DB files)	£57.00
WordPerfect 2.0	(hot new version of famous PC WP)	£199.00
Write Now 2.2	(last straightforward WP, a doable to use)	£85.00

WP UTILITIES & AIDS

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End Note	(bibliography database desk accessory)	£95.00
Expressionist 2	(create accurate equations from this DA)	£85.00
Grammatik 2.0	(comprehensive grammar checker)	£79.00
Thunder 7	(spellcheck & thesaurus even works in Quark)	£59.00

DATABASES

RELATIONAL

4th Dimension	(heavyweight of the databases)	£595.00
Double Helix	(easier DB for starter programmers)	£445.00
FileForce	(much easier to use and upgradeable to 4.0)	£250.00
Foxbase+Mac 2	(last DB with great interface reads dBase)	£345.00
NuBase	(DBase re-incarnated for the Mac)	£175.00
Omnis 7	(totally Windows file compatible)	£699.00

FLAT

Database	(flat file DA for quick convenient access to data)	£75.00
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Panorama	(flat file DB, very powerful and very quick)	£195.00
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C.A.T. 3.0	(salesman's dream, contacts activities time)	£325.00
DynoDex	(remarkable tool for managing/printing contacts)	£89.00
QuickDex II	(phenomenal DA rolodex card database)	£35.00
TouchBase	(networkable contact database)	£95.00

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Wing 2	(amazing spreadsheet, includes charting and script)	£245.00

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Business Plan Toolkit	(Excel budgeting and forecasting)	£89.00
Sales & Marketing Toolkit	(comprehensive forecasting)	£110.00

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Cricket Graph	(original colour graphing tool for the Mac)	£110.00
DeltaGraph Pro	(powerful flexible graphing tool)	£175.00
GraphMaster	(very good and system 7.0 savvy as well)	£180.00
KaleidaGraph	(highly rated US graphing package)	£149.00

SIMULATORS

Extend	(powerful simulator with built-in language)	£320.00
iThink	(powerful straightforward simulator from Stella (oi))	£495.00

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BeagleWorks	(the latest entrant into the Works stakes)	£195.00
ClarisWorks	(in with a bullet and the best of the bunch)	£175.00
GreatWorks	(best value integrated prog for new users)	£75.00
HandiWorks	(very popular in Europe)	£110.00
Microsoft Works 2	(WP, DB, Curries, Draw, Spreadsheet)	£125.00
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WordPerfect Office	(not to be outdone, WP strike back)	From £95.00

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KeyPlan	(develop in outliner then zap you are in critical path)	£235.00
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MEMORY
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SIMM	1 Mb SIMMs 80ns	£29.00
SM2B	2 Mb SIMMs 80ns	£75.00
SM4MB	4 Mb SIMMs 70ns	£135.00
SM8	8 Mb SIMMs 70ns	£295.00
SM16	16 Mb SIMMs 70ns	£545.00
SMF8X	1 Mb Mac IIIFX 70ns	£35.00
SM4FX	4 Mb Mac IIIFX 70ns	£135.00
SM8FX	8 Mb SIMMs 70ns	£295.00
SM16FX	16 Mb SIMMs 70ns	£545.00
SMFX	LaserWriter II 80ns	£35.00
PowerBook		call

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MacSchedule 2.5

Microsoft Project

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Pegasus Entry Level

EuroPay

MacMoney 3 UK

Ritz

Path

Terranova

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Cricket Presents

More III

Persuasion 2.0

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Desk Paint 3.0

MacDraw II

MacDraw Pro

MacPaint II

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WS3000 Modem (rock solid 1200 BAUD modem)	£235.00
WS3000 V22 BIS (rock solid 2400 BAUD modem)	£235.00
Courier HST dual standard (fast modem for DTP (raster))	£645.00

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DataClub (new pretender to Tops crown)	£105.00
GraceLAN 2.0 (loose name, good network analysis)	£245.00
Liason (print routers and network diag in)	£245.00
Microsoft Mail (classic powerful E-Mail)	£185.00
NetOctopus (network analysis program)	£395.00
QuickMail 2.5 10 User (powerful flexible E-Mail)	£320.00
Timbuktu 4.0 (remote access software for networks)	£65.00
Timbuktu Remote (remote access software for modems)	£130.00
TOPS Classic (a bit down, cheaper version of below)	£95.00
TOPS 3.1 (file sharing software without dedicated Mac)	£145.00

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NetModem (share one modem over entire network)	£335.00
NetSerial (share serial devices on network)	£250.00
NetBridge (bridge networks for extra speed etc)	£355.00

HARDWARE

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Kurta Graphics Tablet (pressure sensitive)	from £365.00
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Mouse Mat (speed pad - white with MacLine logo)	£5.00
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Mac II Stand (vertical floor stand with long cables)	£65.00
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Desert Storm (the Gulf war history)	£29.00
Discs Kids Stories (well known childrens books)	each £55.00
Grolier's Encyclopedia (21 volumes, 9 million words)	£225.00
Learn to Speak French (an... learn to speak French)	£275.00
Merriam Webster Dictionary (the Oxford not on Mac CD yet)	£175.00
Shakespeare Complete Works (at your fingertips)	£65.00
Sherlock Holmes Complete Works (put your feet up)	£65.00
SpaceShip Warlock (fabulous animated game)	£69.00
The Manhole (fabulous graphic adventure for kids)	£40.00
Time Table of History (the history of history)	£89.00
World Fact Book (248 comprehensive country profiles)	£70.00

SCANNING

Agfa Focus II 800GS (best A4 scanner around)	£3895.00
Animas Colour (24bit colour, up to 400dpi hand held inc OCR)	£495.00
Microtek 600ZS (great quality low cost colour 600 dpi)	£1550.00
OmniPage (best OCR currently in existence needs 4MB)	£445.00
OmniDraft (add in to above for dot matrix OCR)	£75.00
OmniSpell (spelling checker for OmniPage)	£75.00
Ricoh RS322 (256 Grey Scale with software)	£895.00
Read-It 3.0 (classic OCR at a good price)	£295.00
Read-It Personal (budget OCR for handhelds)	£155.00
ScanMan (biggest selling handheld scanner)	£225.00
ScanJet IIC (new HP colour scanner)	£1295.00
Scan Xpert (scans up to 1600 dpi/256 grey)	£950.00
Scan Xpert Colour (600 dpi colour)	£1350.00
Sharp JX 300 (superb quality A4 colour scanner)	£1895.00
Typist (handheld with best built in OCR needs 4MB)	£435.00

PROGRAMMING

Plus 2.0 (full colour alternative to HyperCard also for PC)	£325.00
ProGraph (new OOPS programming tool)	£245.00
Prototyper II (creates C code for Windows Menus/Dialogs)	£195.00
QuickBasic (a little BASIC zinger from Microsoft)	£55.00
SmallTalk V (best version of the definitive OOPS language)	£139.00

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Press releases and product news

MacMainFrame 4.0

MacMainFrame 4.0 is a new version of the MacMainFrame Series connectivity products for connecting Macintosh to IBM mainframes. MacMainFrame 4.0 fully supports the new Macintosh System 7.0 operating environment. The support of System 7.0 includes virtual memory, Publish & Subscribe, Apple Events, TrueType and 32-bit addressing.

MacMainFrame also provides a full range of Help Balloons which are especially useful to new MacMainFrame users. It not only offers Help Balloons for all the basic features such as menus and dialog boxes, but also includes specific Help Balloons for the status and error conditions that can occur during MacMainFrame's connectivity operations. Some of the balloons interpret the 3270 status line symbols, some contain additional information about host errors and some suggest when to contact the system administrator.

MacMainFrame 4.0 supports System 7.0's Publish & Subscribe which allows user to take information from a MacMainFrame 3270 window and "publish" it to a Macintosh application. For example, a MacMainFrame 4.0 user can access a mainframe financial application, select or highlight an area of data, and "publish" it to an edition file.

When a Microsoft Excel spreadsheet document subscribes to that edition file, the host data will then be incorporated into the Excel document for further use.

In addition to support for System 7.0, MacMainFrame 4.0 includes new features and enhancements to the basic IBM 3270 terminal, graphics and printer emulations. A new Special Settings feature allows users to further adjust preference settings. This feature is most useful for organizations that have custom mainframe applications where slight modifications improve performance and ease-of-use. With Special Settings, users can configure file transfer settings, change session defaults, copy, paste and cursor positioning methods and change display parameters.

Other new features of MacMainFrame 4.0 include:

- Enhanced support for Model 4 type 3270 terminals;
- New window preferences.
- Support for 64 classes in MacMainFrame gateway products.

Users of earlier versions of MacMainFrame can purchase the upgrade for \$195.00. Avatar Corporation, 65 South St., Hopkinton, Massachusetts, 01748-2212 or fax your request to (508) 4-5-2470.

Address Book Plus™ 2.0

Address Book Plus™ 2.0 is a software program for managing names and addresses. It offers many new features and improvements to extend its functionality. New enhancements include expanded print options, extensive automatic dialling capabilities, expanded data entry capabilities including more fields for vital information, ad-

ditional categories and a user definable browse format.

The expanded printing options include:

- printing on both sides of a page, which reduces the total number of pages;
- preformatted layouts to print address pages, phone lists, mailing labels including Avery and other popular brands, rotary-file cards or envelopes;
- envelope formats include automatic bar coding;
- Custom layouts can be also created and named for later use.

The program supports autodialling and users can now dial from within the application, and the Dialling Preferences feature includes support for international dialling, multiple and long distance prefixes and suffixes for dialling credit card numbers.

For easier import and export users can change the field order and name import and export specifications. A new HyperCard™ stack that allows users to translate address information from HyperCard stacks or QuickDEX files for use in Address Book Plus is included. Version 2.0 also exports data for use by electronic personal organisers such as Sharp's Wizard or Casio's Boss.

Address Book Plus 2.0 is fully compatible with System 7.0 and requires System version 6.0.2 or later, a Macintosh Plus or later model, a hard disk or two floppy disk drives and an Apple LaserWriter, ImageWriter, Hewlett Packard DeskWriter or other Macintosh compatible printer. It is also fully compatible with the Macintosh Classic, LC and II models.

The price is \$99.95. Version 1.0 users can upgrade for \$25 plus \$4.95 for postage and handling.

Power Up Software Corporation,
Attn: AddressBook Plus Mac Upgrade,
P.O. Box 7600, San Mateo,
CA 94403 (415) 345-9381

Carbon Copy for the Mac Version 2.0

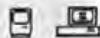
Carbon Copy is a remote control and file transfer software package. With file transfer speeds up to 250% faster, Version 2.0 is System 7.0 compatible and offers the first virus detection capabilities in a remote control package. In addition to value pricing, Version 2.0 is now the first remote control package to include the virus detection capabilities of Microcom's award-winning Virex™ anti-virus software. The new built-in virus detection capabilities enable Carbon Copy to communicate with Microcom's Virex INIT before file transfers are completed. If Virex detects the presence of a virus, it immediately notifies Carbon Copy so that infected files are not passed from one user to another, thus restricting the spread of viruses.

Version 2.0 extends Carbon Copy's security options to include multi-level password entry. The Host can now set up a series of passwords determining the level of access for users at various levels. For example, one user's password may enable him full access to the Host while another user may be restricted to view capabilities only. CallBack security offers an added layer of protection by forcing remote users to enter passwords and receive a call back from the Host if they are authorised.

Additional new features include: "Ghost Screen"™ capabilities, which enable most Macintosh IIs to run without video card and monitor, providing cost-effective Macintosh server functionality.

Modem scripting and built-in editing allow users to customise their configurations based on a standard AT command set.

The price is \$99 per user and \$299 for unlimited network



users per single AppleTalk zone.

Microcom, Inc.,
Still River Corporate Centre,
55 Federal Road, Danbury,
CT 06810 (800) 822-8224

MODE32

This is a unique utility for Mac II, IIx, IIcx, and SE/30 users who want to use System 7 32-bit mode. It allows these systems to access 32-bit mode through the standard System 7 memory control panel in the same fashion as later ROM systems (IIci, IIsi, IIfx and LC). Without MODE32, the controls for 32-bit mode do not appear on the panel and it is not possible to use 32-bit mode.

MODE32 is an INIT and cdev which is transparent in normal operation. Using 32-bit mode, the Mac II, IIx, IIcx, and SE/30 can access up to 128 megabytes of contiguous physical application memory and up to 1 gigabyte (1000 megabytes) of contiguous virtual memory. This mode overcomes the traditional 8 megabyte limit of previous Macintosh Operating Systems.

MODE32 will be of interest both to users with large amounts of physical RAM (>8MB) and those with less RAM who would like to use more than 14MB of virtual memory (System 7 VM or Connectix Virtual).

MODE32 is available free from Apple Computer (UK). Anyone who has already purchased the utility can apply to Apple (UK) for a refund—dial 100, ask for Freephone Apple.

MC73

MC73 is the Motorola 68851 Paged Memory Management Unit, commonly known as a PMMU. The PMMU is required in order to run System 7.0 VM on a standard Mac II. With a PMMU, the Mac II is fully compatible with standard VM virtual memory, but still needs MODE32 to operate physical or virtual memory in 32-bit mode. The original 68020-based Mac II incorporated a motherboard socket specifically designed for this memory coprocessor. Ironically, the more recent 68020-based Mac LC is not able to take advantage of this upgrade as it lacks the necessary motherboard socket. The name MC73 refers to the fact that the PMMU is the current MC68851RC16A Mask 73 version, the only version known to be fully compatible with all of the Macintosh Operating System. MC73 also includes a 3M disposable grounding strap and a detailed installation manual. The product has a list price of \$179.

Connectix Corporation, Menlo Park, California,
(800) 950-5880, fax (415) 324-2958

Bio Sci II Elementary

This is a life science videodisc package complete with lesson plans, indexes, vocabulary-adjusted comments, and HyperCard software for the Mac. It has been designed exclusively for meeting the needs of teachers of the fourth, fifth, and sixth grades.

Bio Sci II Elementary enhances the instruction curriculum by providing short movies, thousands of still images, animations, and 3-D graphics on laser videodiscs. By using the accompanying directory of selected images and films, elementary teachers no longer have to search through thousands of visuals to find images and films suitable for their classes. The new barcoded directory indexes a subset of images on the videodisc based on their value for elementary instruction. Visuals are classified into dozens of topical groupings such as: Biomes, Leaves, Seeds, Birds, Mammals, and Food Chain. In addition, Videodiscovery will provide supplemental print media, including indexed-teacher les-

son plans (as submitted by elementary teachers), student activity worksheets, and barcode posters, to facilitate integration into the school's curriculum. The teachers' lesson plans for each activity will be presented in one book. Each activity will be indexed for the science process skill and science theme which it supports.

The complete Bio Sci II Elementary Package is being offered at the introductory price of \$395.

Videodiscovery, Inc.,
1515 Dexter Ave. N,
Suite 400, Seattle, WA 98109-3017 1
800-548-3472

FontMonger™

FontMonger is a type conversion and modification program. It is a simple-to-use application that provides type format conversion in any direction among PostScript™ Type 1 fonts, PostScript Type 3 fonts and TrueType™ fonts. FontMonger contains proprietary algorithms which are applied during the conversion process.

FontMonger contains a range of unique type transformation capabilities. Characters from various typefaces can be combined into a single font. This provides immediate access to widely-used characters directly from the keyboard.

Small cap and oblique typefaces can be created from an existing typeface by applying new height/ width proportions or slant transformations.

Available from Letraset UK — 071 928 7551.

InterPlot

InterPlot is an application that allows scientists, engineers and other technical users to plot 2-dimensional data and perform traditional as well as graphical data analysis. It is distinguished from other scientific data analysis programs by its object-oriented approach and its emphasis on direct, on-screen, data analysis. In InterPlot, every curve in a plot window is an individually selectable object. This makes style changes easy. Just click anywhere along a curve to select it, then use a graphic style menu to change point or line style, colour or fill pattern. Curves can be cut and pasted between plots as can any other plot element.

InterPlot's object-oriented nature also allows for a whole new class of tools for graphical data exploration. The program includes a palette of tools for on-screen integration, differentiation, statistical operations and more. For example, using the integration tool, a scientist could find the area under part of a curve of interest by clicking on the curve to select it, and then dragging the mouse between the endpoints she wishes to integrate between. As the mouse is dragged, a curve-following cursor rides along the curve and the value of the integral is dynamically displayed in the tool window.

In addition, InterPlot fully supports more traditional data analysis with function evaluation (including Bessel, Gamma and Incomplete Gamma functions), linear and nonlinear curve fitting, FFT and more. InterPlot is also the only data analysis program for the Macintosh that automatically propagates X and Y error values through any calculation. The retail price is \$99.95.

Scientific Visions, P. O. Box 1971, Silver Spring, MD 20915
(301) 593-0317

MacEmulate

MacEmulate version 2.32 is terminal emulation software that emulates a wide variety of terminals such as Wyse, TeleVideo, Hazeltine, ADDS Viewpoint, and Data General.

MacEmulate is designed especially for terminal emulation. It supports the advanced features of "real" terminals



such as 132 column display, multi-page memory, slave and echo printing, and programmable function keys. It also includes many convenient features that conventional terminals do not have, such as macros, text capture to disk, tabulating and printing text files, cut/ copy/paste from screen, and many user preferences. It is fast, easy to use, and provides an excellent method for Mac users to access multi-user computers.

Cornerstone Data Systems,
P.O. Box 6081, Anaheim, CA 92816
(714)772-5527

UtilEase

UtilEase is the data management tool for use with Contact Ease™. Some of its features will eventually be incorporated into Contact Ease, but by releasing these features as a separate utility program people who need them get them six to twelve months sooner.

Here's just some of what's in this package:

- Duplicate searching—Helps you find and list duplicate entries (and close calls). Makes it easy to avoid sending multiple letters to the same person.
- Custom report generator—Create lists of Contacts, any fields in any order. Lets you "roll your own" report format and save it for reuse. Group Find & Replace Lets you systematically rearrange your data and clean up data entry mistakes. Use it to adjust capitalisation or make custom fields more consistent.
- Data clean up corrects many common data entry problems automatically. Uniform data means easier searching and higher quality duplicate checking.
- Out Box tools—The Out Box is where the letters are held until you're ready for printing. These new tools recover from letter printing problems effortlessly. Remove items from the Out Box, or restore letters for re-printing (in case the Letter had a typo or the printer jammed).

• Activity reporting—List activities by date. Great for creating reports of all the things your organisation has done (weekly/daily phone logs by Personnel, for example). Lists Active, Completed, or On-hold Activities.

• Import/Export Plans—Plans are used to tell Contact Ease how to keep in touch with a group of people. Now you can share marketing Plans with other users! If you have a Plan that works, share it instantly with others in your organisation. Import/Export any Plan with all associated Scripts and Letters. Great for larger sales organisations and franchises.

UtilEase sells for \$99 (Contact Ease™ is required to run UtilEase)

WestWare, Inc., 10148 Diamond Head Court, Spring Valley, CA 91977-5317, 800-869-0871 / 619-660-0356

Net Watchman

This is a software package that turns a Macintosh into an early warning monitor for AppleTalk network managers. The program uses dialog boxes and custom sounds to notify administrators of changes and potential problems on a network.

Net Watchman centralises monitoring of AppleTalk devices across an internetwork by checking zones, services and nodes and sounding a customisable alarm if any disappear or reappear. Net Watchman can see through bridges and gateways to an entire network and may be used to monitor devices in any environment which supports AppleTalk protocols, including LocalTalk, Ethernet and Token Ring. If a change in device integrity occurs, the network manager is notified immediately and can check into the problem.

The Kerning Palette

Clearface Inc. is now shipping The Kerning Palette, a kern table editor which is an Xtension to QuarkXpress. The Kerning Palette is a professional tool that gives users the ability to edit the kerning tables of their open fonts without ever leaving the QuarkXpress environment.

Integrating a kerning table editor into the QuarkXpress environment adds these capabilities:

1. allows adjustments to kerning tables from within QuarkXpress, while working on a document and viewing pairs in context
2. instantly reflects changes to tables in open documents
3. keeps track of which pairs have been adjusted by users
4. creates custom font suitcases for users with fonts they select
5. transfers kern tables between the Xpress Data file and font suitcase files
6. creates text files either in Quark's 200th of an em units, or the standard em to 1/1000th precision
7. instantly modifies the tables of fonts open on the system

A floating palette on the desktop shows the values currently present in the kerning tables of open fonts. The user can select a pair for adjustment by placing the cursor inside it, and using the Palette's commands to add or subtract space between the characters. Changes are reflected instantly throughout the open document. A readout on the Palette indicates whether the value for a given pair has been changed or not in the current session.

The units shown are the same as those used by the manual kerning and tracking functions in QuarkXpress.

The new and improved tables may be exported to a variety of formats. Sophisticated Sort and Selection functions are provided in the Export dialog to simplify the process of selecting fonts for export, and combining batches of fonts and export formats in a single operation.

Users can instantly create font suitcase files which contain all of the fonts they are using on a job or document (or any set of fonts they wish). Tables can be output to text files for further massage in text editors, or in database or spreadsheet applications. And/or, the open font suitcase files may be instantly modified with the new tables.

A demo version is available in Lib. 12 "Demos and Reviews" of the DTP forum, and Lib. 0 "New Uploads" of the Art and Design forum. The name of that file is "KERNXT.SEA" and it's a self-extracting archive. The download is 82k. The demo only exports kern tables with uppercase characters; also it will politely decline to modify open fonts with these crippled tables. However documents will print accurately from within QuarkXpress. Includes a brief tutorial and other documentation.

The Kerning Palette costs \$395., with additional copies \$100 each. There is copy protection. It carries an unconditional 30 day money back guarantee.

Clearface, Inc.
(800) 538-6779
(212) 673-0114 fax



DeskWriter C

Ewen Wannop looks at the colour version of the DeskWriter printer from Hewlett Packard

Introduction

When I reviewed the DeskWriter last year I was unaware that a colour version of this printer was about to be released by Hewlett Packard. I have now had a chance to examine this new printer and can report how it performs.

At first sight the DeskWriter C ink jet printer looks just like the monochrome version. The only outward sign that is different is a modified badge and a rewording of the control buttons. In fact with a standard black and white ink cartridge fitted this printer performs in an identical way to its black and white stable mate. I was impressed yet again in the quality, crispness and output detail that this printer gives in black and white. The colour resolution proved to be just as crisp in detail. However I wanted to know how it would perform when printing in colour to warrant paying an extra £400.

The DeskWriter C, like the monochrome version, is not a postscript printer. It is only able to print high resolution images in colour by using an installed custom printer driver. This is the same way that the black and white version or a StyleWriter operates. This printer driver interprets QuickDraw print commands sent out from a program and creates a high resolution bit mapped image in memory. It is this bit mapped image that is actually sent to the printer and that creates the final image. The results you will then get with the DeskWriter C will depend very much on what an individual program issues when you select print and the colour capability of your computer.

The DeskWriter C is not a full four colour printer. It uses an optional three colour cartridge in place of the usual monochrome one. However this produces a respectable dark grey when all three colours are superimposed. I did not feel the lack of a black printer in most of the printing that I did. You cannot normally make a second pass and superimpose black later, as with the monochrome printer the paper tends to cockle slightly with large areas of ink. It would also be very difficult to actually register the two images.

Colour Printers

At present there are basically three successful methods used for desktop colour printing.

The oldest of these is the thermal wax transfer process. This is characterised by a high sheen to the final print with rich solid colours. It has been reborn with the new solid ink printers and gives very good results. These printers cost around £5000.

The best colour printers are without doubt the colour laser printers. They are expensive printers but give superb results up to A3 in size. They typically cost around £10000 each. The Canon 300 colour photo-copier can interface directly to the Mac and is becoming very common these days. It clocks in at £30000 but is capable not only of printing but scanning as well!

The ink jet printers are the cheapest colour printers costing from around £500 upwards. They do not give as rich a colour print as the others, but can use plain paper, are cheap to run and cost little to buy. The results are better than the average colour newspaper photograph, but not as good as mass produced colour magazines, though they can come close to it. The images in comparison tend to lack weight and depth of colour.

Limitations

You will need at least 2mb of memory under System 6.0 or 4mb under System 7.0 to print with the DeskWriter C. As seems to be generally the case these days, the more memory you have the less chance you have of running out of it at a crucial moment.

You will also need a suitable Macintosh. Monochrome Macintosh computers can think in colour, and print using the eight basic colours. This is quite enough for programs like MacWrite and other word processors, and will allow many other programs to output basic spot colour within a chart or diagram, but is not good enough for colour scans or colour drawing programs. The DeskWriter C performs well with these kind of programs for basic spot colour work.

Colour Macintoshes will either have 32-bit QuickDraw in ROM or will have the 32-bit QuickDraw INIT file in its System folder. System 7.0 automatically supports 32-bit colour as required. However if you only have a 256 colour display, you will not get smooth coloured tints. If you have a true 32-bit colour display you will get a much smoother result on the DeskWriter C. Basically the more colours you are able to display the smoother the results. You are very unlikely to get a better looking print than your screen already gives.

This however is only part of the story. Not all colour programs may be able to print in colour. Illustrator for instance, produces a crisp grey image with no colour content, however hard you try and configure the dialogs. FreeHand on the other hand prints excellent coloured tints which are a very good representation of the screen preview image.

A final point concerns the quality of paper you use. Hewlett Packard recommend their own special laser paper. I found that I got good results using both Melotex and RAM laser paper. Ordinary photo copier paper just did not produce the depth of colour.

The Results

I experimented printing with various programs ranging from MacWrite through ClarisWorks, PageMaker, XPress, PhotoShop, MacCheese, FreeHand and Illustrator. I used both a 32-bit Mac and an 8-bit Mac. These programs were chosen as a sample of the kind of programs that you might normally use.

Basic spot colour - Printing from MacWrite and ClarisWorks gave an example of basic spot colour printing. The results showed good solid colours and were very acceptable. In fact all the programs I tried that used basic QuickDraw colours performed well. Any black printing produced a good readable deep grey colour with no colour fringing.

Colour scans - I took some TIFF and PICT colour scans and experimented printing with various programs. The best results were obtained on the 32-bit IIcx and gave a good coloured image. This was what I expected. However I had to be quite careful to set all the 'colour switches' in the dialogs to their optimum to get the best results. Hewlett Packard include a 'Read Me' file with the printer drivers which explains in detail how to set up these switches for various specific programs. Heed their advice!



On the 8-bit IIx the scans tended to have some texturing appearing in what otherwise would have been a smooth tint.

Colour Drawing - This was where I expected problems and I got them with a vengeance. If you look back at the review of the monochrome printer you will have seen that the best it could do from an EPS FreeHand export was to print the screen image only. The DeskWriter C is no exception. You will not be able to get a better image than your screen can produce. The 32-bit screen giving of course the best results.

Of the two major object drawing programs on the market FreeHand gave excellent prints in full colour. Illustrator was another thing all together. It prints, but only in shades of grey. The picture is there in full resolution, but no colour. Hewlett Packard warn you of this in the documentation.

Overall - The colours from most programs were a good representation of the screen image. The resolution was excellent as was to be expected from an ink jet printer. The lack of depth to the colour and the washed out appearance were the main drawbacks.

It is difficult to actually quantify the printing speed. It is of course slower than the monochrome version due to the extra passes required by printing head. It is more or less a third the speed due to the three passes. A large colour scan could take several minutes, not because of the slower printing speed, but because the extra data has to be prepared and sent down the printing cable. This contrasts with a simple document with some occasional spot colour. This would print almost as quickly as black and white. Of course with the black and white cartridge inserted (a matter of moments) it prints at the same speed as the monochrome printer.

Conclusions

The DeskWriter C should not be thought of as state of the art in colour printing. It does many things well and with a 32-bit Mac can print very good colour images from most programs. It is also a superb black and white printer giving

resolution the equal of a laser and in practice can print finer text than most laser printers.

Its limitation is that it cannot cope with fast high quality colour printing. To achieve that you have to spend several thousands of pounds more. But for what it is I think it is a better buy than any of the other ink jet colour printers on the market I have seen.

It will not work with all programs, though the exceptions are few. You would need ask your dealer to check the disk documentation and see that any programs you specifically wish to work with will not have any problems with the DeskWriter C in colour.

It is fully AppleTalk or direct connect compatible, allowing you to link on a network if you need to.

For the odd colour proof, or for spot colour in letters, spreadsheets and charts, it is an excellent printer. Pop in the black cartridge and you have a work horse of a printer.

While researching for this article I discovered that the list price of the monochrome DeskWriter was set at nearly £800 just a year ago. How things have changed in such a short time!

Product : DeskWriter C

Manufacturer : Hewlett Packard

Available from :

Bidmuthin Technologies Ltd

The Chase, Pinner

Middx HA5 5RX

Price : around £800

Value for money : 

Performance : 

Documentation : 

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Law Office Manager™ 2.0

Press Release from Avocat Systems

Avocat Systems has announced the release of Law Office Manager (LOM) for Apple Macintosh computers. LOM is a client and case management package, tracking personal data on clients, important dates, docket numbers, opposing parties and their attorneys. It will also keep track of witnesses, addresses, phone numbers, insurance companies and claims representatives, automatic conflict checking, forms creation.

According to the company, the package will also serve as a perpetual calendar that tracks dates on which tasks are due, do conflict checks, create forms, custom labels & reports. In use, a daily mail log is available by clicking on

the appropriate icon, allowing the user to view the log. Information is cross-referenced by client, deadline date, person responsible and one of three levels of priority.

Avocat Systems says that LOM will handle an unlimited number of clients and matters, and provide automatic client numbering, with various options. The program has a word processing mode, a report editor, and a label editor.

Avocat Systems' Kathy Moore said: "The legal market has been in need of a broad-based docket control tickler systems."

"Since all of our clients are attorneys their wealth of knowledge and guidance was invaluable. They deserve the credit; we just wrote the code," he added.

LOM is a multi-user program. The price is dependent on the number of users, but starts at \$1,295 for one user. A system with ten users has a suggested list price of \$2,495. Above ten users, add \$199.00 for each additional user.

Avocat Systems will also be releasing LOM-Modules that can be plugged into LOM for practice specific firms. The first modules (Bankruptcy & Collections) will be released 1st Qtr. Pricing of the modules will range from \$99.00 to \$999.00. Avocat plans to release 10 modules in 92.

The IBM Windows version of LOM is also expected to be released in the 1st Qtr.



Kid Pix

A review by David Tointon of this fun painting package for all ages

They say first impressions last, and my first impressions of Kid Pix were very good. It is packaged in a colourful, attractive box and comes on 2 800k disks. The manual is

very clear and easy to read with lots of nice illustrations. Installation on to a hard disk was simple and straightforward. Now, a bit about Kid Pix. It is a painting package designed especially for young children, so that they can express their ideas in an interesting and often delightful way. As well as having standard tools (well sort of), every tool has a kind of sub-menu that appears at the bottom of the screen allowing a wide range of special effects. Kid Pix was written by a father for his son.

Now that you know the purpose of Kid Pix I should warn you of 2 things before we get down to the nitty gritty. A) If you buy it for your kids then I suggest you buy another Mac, so that you have actually got a Mac to use in the 23 and a half hours of the day that your kids are playing with Kid Pix. B) If you do get chance to have a go with your Mac then DON'T have a look at Kid Pix. It will stop you getting your work done.

Starting Kid Pix

Soon after you have double clicked on the Kid Pix icon a screen comes up with the illustration found on the front of the box. Then there is a screen saying 'This copy of Kid Pix belongs to...', and in the background there are varying illustrations. Then, without a hint of a protection thingy, a plain screen appears, and you are ready to paint.

Kid Pix basics

I say 'plain screen'. You could call it plain. That is to say the large percentage of it is, at the moment plain, however a brief description of the other few percent is required. At the top of the screen is the menu bar, which is just about standard apart from the little icons that accompany each option. The goodies menu is the only menu that is not quite normal. On the left hand side of the screen is the main tool palette. This works on the same principle as most painting packages, you just click on the picture that represents the tool you wish to use. In the bottom section of the tool palette is a colour palette, with 36 colours showing. At the top of this, the

selected colour is shown. At the bottom of the screen is a horizontal palette which changes according to the tool you have selected. On this there are icons which represent a tool's different options. If there are too many options for display at one time, it is possible to scroll through more options by clicking on an icon at the far right of the palette. For future reference I will refer to the left hand palette as the main palette, the colour palette as the colour palette, and the bottom palette as the Options palette.

Using Kid Pix

Everything about Kid Pix says quality. In use, everything runs smoothly on an LC, 12 inch colour monitor, running System 7. It can output to almost all standard printers used with the Mac. It even makes a reasonable job of using the ImageWriter's colour ribbon. When I let some young children loose on Kid Pix they adored it. The sounds and wacky options kept them entertained for hours. Come to think of it they kept me entertained for hours. Come to think of it they kept everybody entertained for hours. The beauty of it is, kids can't make mistakes because everything looks good, no matter where you put it. Sorry if I seem to be writing an advert for Broderbund software but I can hardly fault Kid Pix.

The Tools

The tools in order of appearance are: Pencil, line, rectangle, circle, paintbrush, mixer, bucket, rubber, letter stamp, picture stamp, Removal truck, and the undo guy. The first four haven't got too many interesting options just choices of patterns etc. The paintbrush is a painting program in itself, however. There are loads of options from leaking ink, to kaleidoscope, to soda bubbles. The mixer allows you to muddle your picture up in many weird and wonderful (and often radical) ways. The bucket is fairly standard but with a couple of fun options. The rubber is different to any other I have seen. Wipe your screen with a dynamite explosion. Or watch the count down to its destruction. There are many more peaceful erasers as well. You can stamp the alphabet on to your screen with the letter stamp and as you select your letter it is said by one of many different people. Here is my first very small complaint. The alphabet is pronounced in upper class (A,B,C). Young children may still be used to learning the alphabet in lower case speech (a,b,c). There should at least be an option to change between upper and lower case pronunciation. However this really is only a minor problem. Next is the picture stamp tool which has over 100 different colour stamps varying from teddy bears, to trains, to computers. The removal truck allows you to select a part of your picture and move it to another area. Finally the undo guy (also selectable under the edit menu) undoes your last action accompanied by a whoops or an oh no sound.

I have mentioned some of the tools sounds, but all the tools are accompanied by a gurgle or splash or other wacky noise, and this all adds to Kid Pix' atmosphere of being a fun painting program.

The menus

The file and Edit menu are bog standard other than the miniature icons that appear to the right of each choice (similar to the System 7 Apple menu), and need no



description. But I suppose I ought to tell you anyway. The file menu has under it the following options: New, open, close, save, save as, page setup, print, and quit. Under the edit menu you can: undo, cut, copy, paste and clear. Now the interesting menu. The goodies menu has under it: Small kids mode (makes the environment safer for young children by hiding all the menus (apart from one needed to switch SKM off) and putting a 'bib' behind Kid Pix so they cannot accidentally change programs if it is running under MultiFinder), edit stamp (allows you to edit the picture stamps), tool sounds (allows you to switch sound on and off), record sound (record a sound with MacRecorder, a IIci, an LC, or any of the new Macs with sound input), play sound (play a recorded sound).

Problems

I think you will have probably guessed by now that there are hardly any problems with Kid Pix. But there are some very minor problems. The alphabet speech (mentioned earlier) and a couple that I have not mentioned so far. As far as I can see there is no way to change colours via the apple colour picker. Also, the sound recording is very basic and not too useful. I think either a more advanced sound recording system (as an option), or the ability to add the sounds to tools etc. This would make the sound recording capabilities much more useful and a real part of the program, rather than just a little extra bonus. However, sounds that you record can be saved as a part of the picture so that when you next load the picture the 'play sound' option will be available.

Conclusion

The problems mentioned above really are insignificant when you look at the program in general. A genuinely useful application and faultless operation make it a must for your shopping list. Now for the real shock. It only costs £35. Kid Pix will be a definite hit in the home and classroom. It is as much fun as Crystal Quest, about the same price, just as addictive, and 20 times more educational. ■

Product : Kid Pix
Publisher : Broderbund
UK Distributor : SoftLine Distribution Ltd
Available from : Apple dealers

Price : £35.00 + VAT

Value for money :
Performance :
Documentation :

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MAC - graphics

Ewen Wannop reviews this reference book for desktop publishers and graphic designers

Unless you have had the benefit of four years at art school becoming a graphic designer (or, even if you have had this experience) you will find that you will constantly need reference material to help the creative process.

Most designers keep type specimen sheets so they can visualise how a font will look on paper. They will keep a Pantone™ colour swatch so they can specify a particular colour to the printer. They will have a library of collected reference material and examples of good design. These things are expensive. An outlay of several hundred pounds is not uncommon in creating a library of visual reference tools.

All this has now changed. In one handy spiral-bound book, probably all the reference you are ever likely to need has been collated. This book is available from Apple2000.

The book itself is beautifully presented and printed. It is a pleasure to look at. This is no mere coffee table book, and is divided into ten informative and useful sections.

1. Typography

Covers the different types of typeface and how to use them, also the associated terminology. Includes examples of different visual effects and how to achieve them.

2. Type and Tints

The effects of using type in different tints and colours, and how this affects their legibility.

3. Type and Image

How type can be used with both scanned and drawn images, with examples of many effects you can achieve.

4. Rules and Shapes

Legibility of rules, their thickness, pattern and colour.

5. Line Screen

Examples of different tint weights and dot sizes, with extensive density charts.

6. Line Art

Examples of pattern and PostScript fill, line art scaling and working with illustrations.

7. Halftone Image

Examples of the halftone image with different screen patterns and dot sizes.

8. Process colour

94 pages of colour tint charts, the most complete you are likely to find. Pantone™ colours are not quoted, to keep pricing down, but the weight of CMYK colour is given (you can easily cross reference that on most drawing programs).

9. Colour Combination

Extensive examples of combining colours with each other and with greys. Process colour examples as backgrounds and with images and shapes.

10. Reference

A reference to both printer and computer terminology, a bibliography of further reading and useful magazines.

If you use desktop publishing programs or techniques in any way, this book is a must for you! **The price? £29.95!** Available from: Apple2000, PO Box 3, Liverpool, L21 8PY. ■



USER GROUP

CONNECTION



Bane of the Cosmic Forge

Peter Kemp reviews the latest release in the 'Wizardry' series of adventure games

Once upon a time, all proper adventure games were text based. Then "Wizardry" arrived. Overnight, Apple II gamers found a semi-graphical world of Fantasy Role Playing Games (FRPGs), in which a party of six adventurers went forth and explored level after level of dungeons, did a fair amount of hacking and slaying and — depending on the rolls of an electronic dice — acquired experience points, exotic weapons, new skills and maybe even a little pocket money.

Of course there were limitations on the Apple II (even in hi-res) and screen presentation was pretty modest, with the player's view of the dungeon being limited to a basic wire-frame picture. Simple key commands were used to guide the party around, kicking down doors as and when the need arose. The outlook for a badly equipped party was — like life in the Middle Ages — nasty, brutish and short. But with patience, skill and cunning, particular groups of characters would "click" and their combined talents would enable them to survive long enough to become self-sufficient, wandering at will throughout the dungeon, gathering booty and glory along the way and woe betide anyone (or anything) stupid enough to get in their way.

In the first week I came across Wizardry, I averaged no more than three hours sleep a day. If ever a game had that magical "just one more go" quality, it was Wizardry. What was behind that next door? What was on the next level down? Why was Fozzie Bear involved? And was it true that "Trebor Sux"?

The formula was successfully repeated (with variations) in Wizardry 2, 3, 4 and 5. The player had to assemble a team of adventurers and then explore, understand, map and — hopefully — live long enough to solve and survive the myriad of traps, puzzles and grouchy monsters standing between the team and anything resembling money. Between them, the characters needed many different skills, ranging from brute force (and a two handed axe!) through to a spell casting ability sufficiently powerful to fly over the deepest pits. Each game required a generous allocation of time, attention to detail, the ability to map accurately and a soundproof booth where the player could go and scream when it all got a bit too much.....

For whatever reasons, only the original Wizardry (and

very recently, Wizardry 2) was available on the Macintosh. Perhaps this is a reflection on the size of the potential market, but in any case, the dearth of good FRPGs has long been an irritation.

Now Sir-Tech Software has released Wizardry 6 for the Macintosh — "The Bane of the Cosmic Forge". The package contains six (800K) disks, and a 128 page book containing an introduction to the latest scenario, along with comprehensive instructions for playing the game and a full explanation of all the magic spells available to characters as they progress in stature. Although the game has no on-disk protection, each time it's booted the player is asked for a key word chosen at random from a 16 page booklet printed in dark blue ink on deep crimson paper. (Sure, this might be unphotocopyable, but it's a pain in the **** to read without a magnifying glass and a bright light!) The game comes in two versions — black and white (which defaults to a MacPlus size window) and colour (which uses the available screen) — requiring 1Mb and 2Mb respectively.

At this stage, the review would normally include a screen shot to give a flavour of the game. However,

Sir-Tech has written the game in such a way that it takes over control of the Mac completely, which means that I could find no way to get a screen dump. That's a pity, because at first sight, the on-screen presentation is impressive. However, as soon as I started to play, I hit problems, so let me itemise what I found good and bad about the game:

The good news.

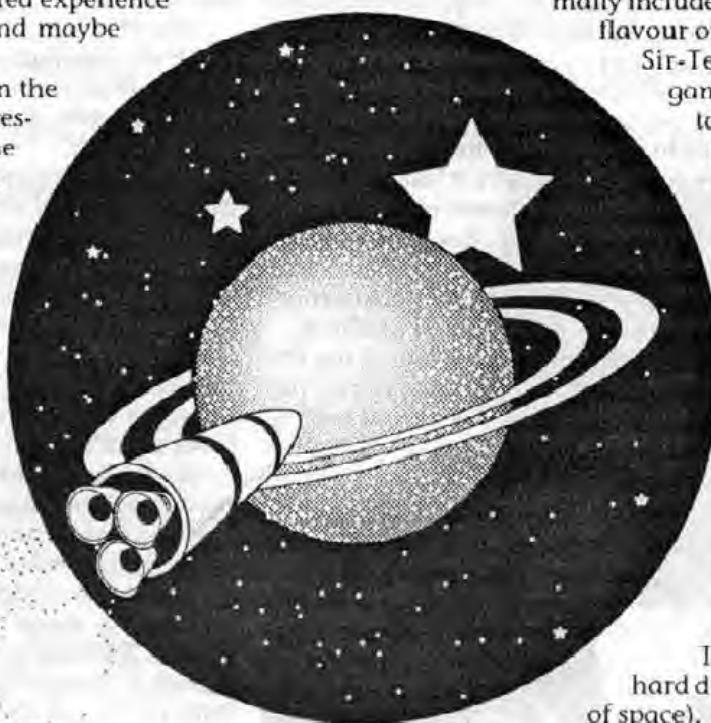
The game runs from the hard disk (but it needs 2.5Mb of space). There are 11 races, 14 professions, six spellbooks, NPCs (with whom one can converse in natural English), 400 items of armour and weaponry plus a scrupulously researched combat system (with both primary and secondary attack) — even to the extent that each part of the body has its own characteristics in terms of hit points, vulnerability, armour protection and so forth.

A lot of thought has gone into some of the weaknesses of previous versions. It's no longer possible, for example, to drop (or fail to pick up) an item essential to completion of the game. (It was probably easier to implement this than allowing players to drop things and come back to them later — as it is, once dropped an object disappears forever....)

The dungeon and environs are well presented, with the old wire-frame graphics left far behind — the views are quite realistic. There is a lot to explore and from the conversations on CompuServe a lot of people have had a lot of fun playing it through to each of the (four possible) endings.

The bad news.

This game is slow! Even playing in black and white it's slow. Turning off the sound and reducing message levels to the absolute minimum is better — but it's still slow, espe-



cially the animation during combat.

The game takes over complete control over the Macintosh and makes few concessions to the Macintosh philosophy. No DAs. No MultiFinder. In mouse-driven mode, there are no key shortcuts. After inserting a floppy disk, the player has to hit return to let the program know a disk's been inserted. (Maybe this is no big deal, but I reckon we bought a Macintosh precisely because a computer should be able to recognise it's been given a disk to deal with!)

The graphics are "chunky" — and so is all the lettering of the onscreen messages. The sort of thing you'd expect on a Commodore 64. Maybe on an early IBM. But certainly not the sort of thing Macintosh owners expect. (Just to give the game away, some of the graphics files have names ending with ".CGA"!)

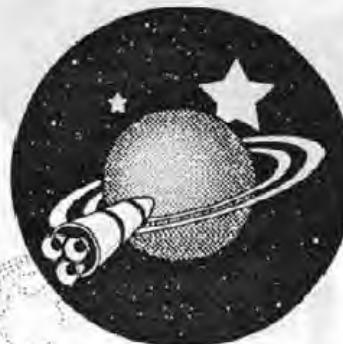
Given the clumsiness of the interface, there are too many "fiddly" items. Trying to use a key to unlock a door involves a minimum of 5 mouse clicks and even more if the player has to scroll down a list of possessions. Wrong key? Then start again from scratch. Since there are no hints as to which key opens which door, there is a large element of hit and miss — and yet there are more than twenty different keys in the game!

Conclusions

I have tried and tried to get stuck into this game and like it. Time and again I've come back to give it "one more go". Each time, I've ended up grinding my teeth at the idiosyncratic interface and quitting in irritation. But this is only my opinion — from what I've seen on Compuserve, there seems to be a consensus that if one gets "through the pain barrier" then "it will all be worthwhile". Not for me, I'm afraid.

On the other hand, if you want to play one of the few FRPGs available for the Macintosh — and you're not squeamish about losing the Macintosh "Touch and Feel" — then Bane of the Cosmic Forge will give you a lot of game for your money.

My thanks to Elizabeth Littlewood for the loan of her personal copy for review. Sorry to let the side down, Elizabeth! (I hear that Wizardry 7 is due out for the Mac soon and that it will have a "much improved interface", so there's hope for me yet.) *



Product : Bane of the Cosmic Forge

Publisher : Sir-Tech

Available from :

Apple dealers

Price : £35.00 + VAT

Value for money :



Performance :



Documentation :



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RAM Image Transfer Materials

by Ewen Wannop

I should think that most of us go and buy the cheapest copy paper we can find to use in our laser printers. After all it saves pounds when you print a ream of paper in such a short time.

If you require high quality printing for camera ready artwork or for presentation purposes, this may well be a false economy. There are better alternatives to be had.

One of the problems of the laser printer, and a problem which was highlighted by my recent reviews of the DeskWriter ink jet printers, is that however fine a dot resolution the laser says it can print, you are at the mercy of the paper you print upon.

The laser process works by transferring powdered ink from an electrostatically charged drum to the printing paper. It then fuses the ink by melting it onto the surface of the paper. If you use ordinary copy paper, you present the laser with a surface resembling a bomb site. The ink just goes anywhere. No wonder that a laser print cannot hold fine detail.

The ink jet printer by squirting the ink where it is needed, manages to avoid the spread of ink and the consequent lowering of resolution.

We normally use a rather expensive printing paper for producing the magazine. The Melotex paper we use is not easy to come by and usually you need to buy a ream of A1 paper and have it cut down to size.

A London company has addressed this problem and produced a range of materials tailor-made for the laser printer. The RAM Image Transfer materials come in various sizes and colours. They have the advantage of being brilliant white, curl free and with a smooth tactile surface.

Example prints showed that Melotex still held the edge for the clearest and sharpest image, but the RAM papers showed an considerably improved image contrast having better blacks and crisper whites. They also feel better with a crisper feel to the paper.

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About Enhance 2.0

Information about Enhance 2.0 from MicroFrontier, Inc.

About Enhance 2.0

Enhance 2.0 is a completely re-engineered version of the original gray scale image processing program Enhance from MicroFrontier, Inc. The program has been designed for high-end processing and retouching of black and white and gray scale images.

Enhance 2.0 highlights include:

- Fast virtual image technology which enables you to work with multiple images and images larger than will fit in available system memory.

- Support for three different image formats ranging from 256 levels of gray to black and white. Converts quickly between any two formats with optional dithering. All editing features are available in any image format (no need to convert black and white images to grayscale, for example).

- All paint, selection and retouching tools can support multiple levels of antialiasing. Antialiasing is the advanced ability to remove the ugly computerized jagged edges from lines, shapes, text and brushes.....all in real-time, too!

- Multiple levels of Undo/Redo. MicroFrontier's image processing products are the ONLY paint/photo retouching programs that provide the user with the ability to quickly step back and forth between a series of modifications. Be warned that once you become accustomed to this feature you may never be comfortable returning to your old image editing software.

- Continuous tone Masking enables you to use gray scale or black and white images to isolate portions of a document for editing, much like a painter uses masking tape to prevent paint from covering unwanted areas. White dots allow paint to flow freely, black dots prevent any modification and intermediate gray dots provide semi-transparent blending.

- Crop, Scale, Flip, Rotate, Resize, Resample, Perspective, Stretch, Slant or Distort images in any way you wish.

- Advanced filtering features allow you to invert, lighten/darken or equalize images. Real-time level filters include contrast, gamma brightness, posterization, and tone adjustments. Level filter maps can be graphically displayed and saved for later use by direct application or for printer calibration. Fast area operator filters include various intensities of Sharpen, Blur and Despeckle. Make custom special effects filters like emboss, shadow or edge enhancement using the Convolution filter.

- Sophisticated Histogram analysis tool allows you to graph gray level distribution, strategically position contrast

and tone adjustments and calculate areas.

- Blend, Add or Subtract any paint, paste or filter effect in 1 percent increments using the "Paint/Paste/Filter If" window.

- Paint, Air Brush, Stamp, Smudge, Blur and Sharpen tools have adjustable attributes that control Opacity/Intensity, Edge sharpness, Spacing, Repeat rate and fading. Choose from among a large set of brush shapes, all adjustable anywhere from 1 x 1 pixels to 64 x 64 pixels in size.

- Open and Save in a wide variety of image formats including TIFF, PICT, EPS and MacPaint.

- Direct support of many scanners and import/export devices through MicroFrontier, Photoshop or Digital Darkroom plug-in modules.

Before Enhance 2.0 can be used, it must be installed onto a hard disk.

You will need the following before you begin.

1. SE/30, Macintosh LC or Macintosh II family computer.

2. Hard disk with at least 2 1/2 megabytes of free space.

3. Minimum of 2 megabytes of system memory (RAM). Additional amounts of memory can improve speed and performance.

4. System 6.0.3 or greater with the 32 bit Color QuickDraw INIT installed. This INIT file can be located in the folder named Apple Color on the Printer Disk which should be included with your Macintosh's system software disk set. To activate this file, simply place it in your System Folder and restart your Macintosh. If you own a Macintosh LC, Macintosh IIsi, Macintosh IIci or Macintosh IIfx machine or if you are using System 7.0, you can ignore this requirement since 32 bit Color QuickDraw is already built into these systems.

5. A color or gray scale monitor which can display 256 colors is highly recommended, but not required.

In order for Enhance 2.0 to work correctly, it needs to have an "Enhance™ Stuff" folder. This folder must be stored in the same folder as the Enhance 2.0 application or in your System Folder.

Virtual Image Information

Enhance 2.0 often needs free space on available hard drives to store its images if they become too large to fit in system memory. The first time Enhance 2.0 is launched, be sure there is at least two Megabytes of free space available on the hard drive where Enhance 2.0 resides. Then if you would like, use the Virtual Image Preferences from the Preferences sub-menu of the File menu to set up Virtual Image folders on other hard drives. This will increase Enhance 2.0's ability to handle large amounts of image data.

More Information

Enhance™ 2.0.....\$375.00 Retail.

From: MicroFrontier, Inc.

3401 101st Street, Suite E

Des Moines, Iowa 50322

Phone: (515) 270-8109

FAX: (515) 278-6828



CareTracker™

Information about this program to assist patient management

Med4th Systems has announced CareTracker for the Macintosh line of personal microcomputers. The program is designed to assist physicians and other health care providers in the management of their patients. CareTracker is a clinical program, designed to allow "real time" usage while the practitioner is actually engaged in patient care. It is aimed at both practice and academic settings.

The program's designer, Richard Gross, M.D., explains, "While tracking common patient information such as diagnoses, medications, allergies and interventions was a fundamental goal of CareTracker, there is a more powerful place for the program in actual practice. During the numerous brief intervals which occur while seeing patients, you can use CareTracker to help monitor potential drug interactions or allergies, generate rapid electronic 'flow sheets,' and determine which tests or procedures are due for each patient. You no longer have to recall the detailed and changing recommendations for tests based on age, race, when it was last done, risk factors, and so forth. Plus, you can locate within seconds that key article in which you saw a salient fact, rather than having to jot yourself a note to retrieve it later. The program takes care of all that, and much more."

CareTracker uses a unique interface which allows the practitioner to personally enter and update data for each patient faster than with a written problem list. Usually, only a few keystrokes or mouse clicks are needed to enter even cumbersome drug or diagnosis names. An artificial intelligence "logic engine" makes scanning for overdue interventions and drug interactions a matter of seconds.

Additional capabilities include 'intelligent' recall notice generation (letters, labels, and lists are all customizable by the user), automatic printing of problem lists for each patient record, medication lists for patients, flow sheets which graph, sort and calculate automatically, and a medical literature storage and retrieval feature. The latter supports key word searching and rapid entry techniques to minimize data entry time. There is a Bayesian Decision Support Module which provides instant decision analysis data, along with an educational help feature, and a decision tree generator.

CareTracker allows modem access to key patient information from any "dumb" terminal, a feature ideal for the off-site user, such as an on-call physician.

CareTracker's reporting capabilities put extensive control of the data in the user's hands; report logic and format can be as simple or complex as desired. Whether for formal research in an academic setting or for pure clinical curiosity, the user can quickly spot trends, manipulate enormous

amounts of clinical data, and generate practice profiles.

CareTracker is available in two configurations: ready-to-enter for those who wish to add and customize all entries themselves, or with hundreds of pre-entered medications, diagnoses, risks, and screening tests. Both versions allow complete editing, addition, and deletion of data. "While computerizing the business aspects of a practice is necessary and helpful, applying this power to patient care is a far more satisfying and ultimately more important role for computer power. My goal is to place this potential in the hands of the provider directly, rather than several steps away where it is less likely to benefit patients," says Gross.

How Can CareTracker Assist You In Your Practice?

Since most practitioners have not used computers in the support of patient care, it may be useful to explain just how CareTracker might work in a clinical setting. You can easily extrapolate to your own practice, and see how this is a completely independent concept from the billing and insurance systems in most "computerized" offices (in fact, we recommend using CareTracker independently from your billing system [be it Macintosh or DOS] to avoid the processing "overhead" and confidentiality concerns inherent in combining the two).

Place yourself in the office of a typical Care Tracker user...

After installing CareTracker and reading the manual, you proceed to invest some time entering your commonest reference data diagnoses, medications, risk factors, etc., knowing you can always edit or add to them later. Perhaps you purchased the optional pre-entered data version, in which case hundreds of values have already been entered. You have defined your desired "rules" for performing the usual screening or follow-up tests for your practice (for example, mammogram every two years from age 40 to 50, and annually after age 50, etc.). You might begin to enter your personal medical literature collection, key-word indexing in the process with a click of the mouse. For medications, you might add an interacting drug or two for some of the entries

As you see your patients, you begin to enter them one by one. It takes only a moment to do so, since all possible entry short-cuts are available: "choice lists" (you enter your usual "cities" only once, and thereafter choose amongst them with a click or two; phone numbers are formatted automatically; upper case is added as appropriate). For each patient, entering and updating diagnoses, drugs, risks, and other data is as simple as doubleclicking on the screen in the relevant section, or using the keyboard equivalent. You enter only the first few letters of "idiopathic hypertrophic subaortic stenosis" and the whole term is entered for you. Updating takes seconds.

Mrs. Smith comes in, and you call up her record as she awaits your exam. You decide to place her on penicillin and enter it in her record ("pen..." will do). CareTracker beeps and alerts you - she is allergic to penicillin. Thus reminded, you change it to erythromycin. After the visit, you also decide to add theophylline to her regimen, and you enter it into CareTracker. Another beep and message: theophylline might interact with erythromycin, according to your previously entered definitions. In this case, you elect to ignore the "alert" and proceed. She is a bit confused, so you tell CareTracker to print her out a nicely formatted medication list, which "translates" your QID into "4 times daily," and send her off confident that she will remember her regimen.



Mr. Jones comes in for his routine exam. You access his "interventions" section, and press the Update button. Within a second, CareTracker flags for you those tests for which he is "due" according to your criteria. "Knowing" his age, race, sex, previous test dates, and your rules, CareTracker validates your original plans, but also reminds you that he needs a measles re-immunization, since he was born in 1962 and had the "old" vaccine. Wishing to refresh your memory, you quickly search the literature file in CareTracker under the key word "immu..." and find the review articles on immunizations you had entered previously. Perhaps you handle a quick "refill" request for another patient right off the screen while Jones is changing.

Mrs. Wilson comes in for a blood pressure follow-up. In her CareTracker record, you had been following her pressures by entering each visit's reading as a "flow sheet" item. You enter today's reading, along with the dose of medication being taken at the time of each reading. CareTracker presents a chronologically sorted list, plus bar and line graphs showing this data over time, along with the mean, maximum, and minimum readings. In scanning the visual data, it seems her pressures rose each time you dropped the dose below 20mg. You print this for her, and make the necessary adjustments to her regimen. At the end of the day, you press a button and CareTracker prints out a very attractive problem list only for patients whose record was modified that day.

The next day, Mr. Jones calls back, wanting a "report" of his physical. You simply call up his record, select the patient report option, and make the appropriate entries. CareTracker prints out an attractive letter which you can mail to him. Later that day, your mail contains an FDA alert concerning a newly reported drug-drug interaction: first you add it to your drug file to assure future warnings, and then you run a search for every patient who is on those two drugs. You print the list and your secretary calls them all with your advice about the potential danger. You remind your secretary to print the monthly recall notices (which uses the same logic as "overdue status testing" described above).

Home you go, only to receive a call that evening from the emergency room about an elderly patient with numerous complaints. From your home computer (or even a simple terminal) and modem, you phone Care Tracker at the office, and enter a password and the patient's name. You then are presented a neatly formatted summary of that patient's clinical information. You update the emergency room with accurate and current information fresh off the screen.

These scenarios illustrate only a few of the applications and benefits of CareTracker. There are more: sophisticated searching capable of highly academic analyses, computerized Bayesian decision analysis support and decision tree calculations, and user-defined reporting on any major data file, for example. The most amazing aspect is how simple to use the program is in "real life;" after only a few sessions, the program seems to integrate itself perfectly into your routine. You may quickly find it to be an invaluable aspect of your clinical practice.

CareTracker is shipping at \$489; the DataPak pre-entered data package will be just \$49. Additional users on a network are \$199 each, with site licensing available. For more information on CareTracker, contact: Med4th Systems, 716 East Carlisle Avenue, Whitefish Bay, WI 53217, U.S.A.; Voice and Fax (414) 963-1985.

Easy Color Paint

Macintosh Paint Program Distributed by MECC

MECC, a developer and publisher of high-quality software for K-12 education, has acquired the exclusive distribution rights to EASY COLOR PAINT™ by Creative Software.

"This is really our first acquisition of a Macintosh product," said Dale LaFrenz, President and CEO of MECC. "Quite frankly, we've been looking for new products for some time, and it's very hard to find those that are up to our standards of quality and that can be marketed to schools at a modest price. EASY COLOR PAINT fits the bill perfectly. Its suggested retail price of \$89 is far less than many comparable paint programs, and of course we offer volume discounts to schools."

Called "the MacPaint for the color age" by MacWorld magazine, EASY COLOR PAINT is an entry-level paint program for use in black and white and 2-, 4-, and 8-bit color for the Macintosh. Also included is the Hi-Tech Coloring Book™, line art designed to help beginners learn how to use EASY COLOR PAINT.

Steve Taffee, Manager of Instructional Strategies for MECC, said: "Many schools are purchasing Macintosh computers. Among the first applications that they need is an entry-level paint program. EASY COLOR PAINT is a great program for schools, whether they're using a black-and-white Mac Plus, SE, or Classic, or a color-capable system such as a Mac II or LC.

When I saw examples of art created by kids from elementary through secondary schools using EASY COLOR PAINT, I immediately knew that it was not only easy to use, but a very capable paint program. Kids and teachers are going to love it!" EASY COLOR PAINT has been selling well, has garnered excellent reviews in the press, and has been the recipient of several software awards.

"I suppose some people will think we're nuts," said Bruce Ballard, EASY COLOR PAINT's developer. "We've been enormously gratified by user's enthusiasm for EASY COLOR PAINT, but it was getting to the point that we were spending all of our time on marketing and sales, with nothing left over for development. But I didn't want to hand the product over to just anybody. That's what led us to MECC. They can reach both the home and school markets, but more importantly, their philosophy of software distribution and educational uses of computers is consistent with our own."

EASY COLOR PAINT, an SPA awards finalist and winner of an Award of Excellence from Technology and Learning magazine, will join a group of other award-winning Macintosh products from MECC, including the recently released NUMBER MUNCHERS™, THE OREGON TRAIL™, and Wagon Train 1848™. EASY COLOR PAINT runs on a Macintosh Plus or later model computer, with system software 6.0.2 or later, and supports both black-and-white and color monitors. Color printing is available for Color QuickDraw printers as well as for the ImageWriter II. For more information, please call 800/685-MECC, ext. 527.



After Dark and More After Dark

A review of this popular screensaver by David Tointon

Before I start this review, I must warn you that After Dark is so much fun that I keep forgetting that it's a utility, not a game. So try and bear with me, please.

After Dark is one of the most popular screen savers for the Macintosh. Screen savers are used to prevent an image permanently 'burning' into your screen by dimming the screen or putting a moving display on it. After Dark is a particularly novel screen saver. When a screen saver is functioning the screen is said to be 'asleep'. After Dark and More After Dark together have over 45 different

Any module which has sound has a volume control at the bottom of the control panel.

Fish: I wish that Mac games had as good graphics as the Fish! module. In this module, many varieties of tropical fish swim across the sea bed. Note: It took me a while to realise that MAD's extra fish must be installed from within the Fish! module.



Flying toasters: These people are totally insane. Good module, though.

Mountains: Creates a random mountain landscape. Loads of nice options to choose from. You can even choose which planet the mountains are on.

Lunatic Fringe: This module is a fairly decent game by the author of Solarian II, where the aim is to kill everything in sight. This game is a lot better than some of the games out commercially on the Mac, but I still think it could be better.

Virex-D: A module that scans your Mac for viruses while it is asleep.

These are a few of the most unusual After Dark and More After Dark modules. There are many other delightful modules to choose from and all have exceedingly good graphics. One thing I have not mentioned is MultiModule. This allows you to combine modules. You can have different modules running in different parts of the screen, or modules running on top of each other. This adds yet another dimension to After Dark. Also there is a module called Randomizer, which allows you to choose a number of modules for it to display in a random order while the screen is sleeping.

Conclusion

After Dark (including MAD) is not just a screen saver. It is a demonstration of the Mac's graphical capabilities (although a Quadra 900 running Photoshop and being used by a modern day Van Gogh might produce something better). The displays are enchanting (and colourful) and because they are screen savers, they are also useful (a good excuse for you to spend some money). However I must make an important point. If you intend to do any work whatsoever, DO NOT buy After Dark. It is more addictive than all the Mac games put together, and twice as good looking. The one thing After Dark is not is a productivity enhancer.

After that conclusion, I feel I must say 5 serious words: **.....buy it. You'll love it.**

Product : After Dark

Publisher : Berkeley Systems

UK Distributor : SoftLine Distribution Ltd

Available from :

Apple dealers

Price : £29.00 + VAT (After Dark)

Price : £25.00 + VAT (More After Dark)

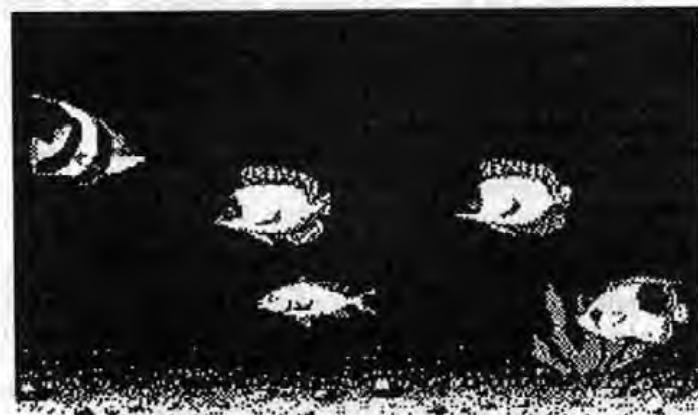
Price : £45.00 + VAT (Both products)

Value for money :

Performance :

Documentation :

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displays, which are known as modules.

Both programs come on 1 disk, and have small accompanying manuals. These are clear and easy to understand, although the program is so easy to use that I hardly needed it. Installation is simple, with After Dark you just copy the files into the system folder, and with MAD an installation program, 'de-compacts' and installs the new modules, as well as updating After Dark to System 7 compatibility.

Using After Dark

After Dark is very simple to use. Its main screen is a control panel. Just click on the name of the module you wish to spend hours enjoying (you will spend hours enjoying them!), and then either click on the demo button, or move into the 'sleep now' corner to see the display. Of course you can wait until the screen falls asleep by itself (you can choose how much time before it does this). Almost every module has customisable features, so if you wish, you can personalise your copy to your liking.

The modules

There are far too many modules for me to describe in detail, but here are a few particularly nice ones:

Boris: Beautifully animated cats prance around your screen chasing butterflies, meowing, lazing around or scratching the edge of your screen. You'll never grow tired of Boris. If you wish to customise Boris then there are various alterations you can make, like the number of cats there are.



How to program the Mac . . .

Some tips for new programmers
by Brian DeLacey

This article was prepared by Brian DeLacey for use in a BCS/Mac seminar on programming the Mac. It is intended to be a list of references and resources to assist people interested in getting started with programming the Mac.

For starters...

••If you are completely new to programming:

I'd suggest buying the Pascal User Manual and Report, to learn Pascal, then buy LightSpeed Pascal from Think.

••If you have programmed before but are new to the Macintosh:

I'd suggest buying Scott Knaster's Book, How to Write Macintosh Software, and a programming language of your choice.

••If you have had some initial experiences programming the Mac:

Delve a little deeper, Inside Mac volumes 1 - 5 should keep you going for awhile. A subscription to MacTutor should be in your budget along with a membership in APDA. And if you're serious about poking around inside the Mac, a debugger like TMON will offer you joyful hours of searching through memory.

Beyond these starters...

I'm not saying the list that follows is complete (because it isn't) or that I endorse any of the products listed below (because I don't), but I am hoping that with the information provided here you will get where you're programming goals lead you just a little sooner than you would without it.

Compilers (2 of the most popular)

LightSpeed C from Think Technologies (div. of Symantec)

LightSpeed Pascal from Think Technologies

You can contact Think, in Bedford, Massachusetts at 010-1-617-275-4800.

Sample Source Code

One of the best, fastest ways to learn to program the Mac is to benefit from the experiences of others. Sample source code can really help.

The BCS/MacTechGroup has a large collection of Macintosh sample source code available for sale. Disks are sold for \$4 each and ordering information can be obtained from the BCS/Mac office at 010-1-617-625-7080 or at any MacTechGroup meetings.

Debuggers and Developer Tools

TMON from ICOM Simulations, Inc., 648 S. Wheeling Rd, Wheeling, IL 60090, U.S.A. : 010-1-312-520-4440

MacNosey (both a disassembler and debugger are offered from Jasik Designs, 343 Trenton Way, Menlo Park, CA 94025, U.S.A. : 010-1-415-322-1386

Where to buy developer related "things"

APDA (Apple Programmer's Developer Association) — 010-1-206-251-6548

Apple Technical Reference Manuals

Apple reference manuals are the best written references I have ever seen. Addison-Wesley is the primary, perhaps exclusive, publisher for Apple's technical references.

- Inside Macintosh, Volumes 1-5
- Inside Macintosh X-Ref
- Technical Introduction to the Macintosh Family
- Programmer's Introduction to the Macintosh Family
- Human Interface Guidelines: Apple Desktop Interface
- Designing Cards and Drivers for Mac II and Mac SE

You can purchase these references through Apple2000.

Books on how to program the Macintosh

- How to Write Macintosh Software, by Scott Knaster (Hayden Book Company)
- Macintosh Programming Secrets, Scott Knaster (Addison-Wesley Publishing Company, Inc.)
- Programming the Macintosh in C, by Bryan J. Cummings & Lawrence J. Pollack (Sybex books)
- Using the Macintosh Toolbox with C, by Jim Takatsuka & Fred Huxham & David Burnard (Sybex books)
- HyperCard Power: Techniques and Scripts, by Carol Kaehler (Addison-Wesley Publishing Company, Inc.)

Addison-Wesley books can be purchased from Apple2000.

Programming Language Reference Books

- C: A Reference Manual, Samuel P. Harbison, Guy L. Steele Jr. (Prentice-Hall, Inc)
- The C Programming Language, Brian W. Kernighan, Dennis M. Ritchie (Prentice-Hall, Inc.)
- Pascal: User Manual and Report, by Kathleen Jensen & Niklaus Wirth (Springer-Verlag, available via APDA)
- Introduction to Pascal, by Jim Welsh & John Elder (Prentice-Hall Intl. Series in Computer Science)
- M68000 Programmer's Reference Manual, by Motorola (Prentice-Hall)

Prentice-Hall books can be purchased through Apple2000.

Monthly Magazines

- MacTutor: The Macintosh Programming Journal (can get very technical)

PO Box 400, Placentia, CA 92670, U.S.A. :

010-1-714-630-3730

\$30 per year (plus overseas postage)

- The Active Window

(has occasional programming/technical articles)
published monthly by The Macintosh Users Group of The Boston Computer Society, One Center Plaza, Boston, MA 02108, U.S.A. : 010-1-617-367-8080

BCS membership is \$35 per year (plus overseas postage)

- Developer Associations

Apple Programmer & Developer Association (APDA)
290 SW 43rd St., Renton, WA 98055, U.S.A. :

010-1-206-251-6548

annual membership fee: \$20 (plus overseas postage)

- Apple Developer Services Program

Apple Computer Inc. 3W, 20525 Mariani Avenue, Cupertino, CA 95014, U.S.A. : 010-1-408-996-1010

• The MacTechGroup of the Boston Computer Society

The BCS/Mac office is reachable at 010-1-617-625-7080

Mac Developer Articles (that may be) of interest

- To Learn C or Pascal, That is the Question
by Meredith Lesly, The Active Window, December 1986
- Learning C at the Speed of Light



by Meredith Lesly, *The Active Window*, December 1986

- Mac Programming For the Rest of Us —

Thanks to LightSpeed Pascal

by Brian DeLacey, *The Active Window*, December 1986

- Waldemar Horwat: TMON Creator

by Brian DeLacey, *The Active Window*, May 1987

- The Main Event:

Programming the Macintosh in LightSpeed Pascal

by Brian DeLacey, *The Active Window*, January 1987

- TML Pascal and Turbo Pascal:

Tools for your Programming Kit

by Brian DeLacey, *The Active Window*, March 1987

- An Interview with Scott Watson:

The Man Who Named His Son Version 2.0

by Brian DeLacey, *The Active Window*, July 1987

- An Interview with Mike Morton; aka Mr. Machine Tool

by Brian DeLacey, *The Active Window*, August 1987

- An Interview with Steve Capps

by Brian DeLacey, *The Active Window*, October 1987

Electronic Networks

CompuServe and Genie have very active areas supporting Apple/Mac developers.

In Control

A To-Do List Manager for the Macintosh

Attain Corporation has announced In Control, its innovative to-do list manager for the Apple Macintosh. In Control helps businesspeople organize things-to-do into lists and juggle priorities to meet shifting needs. Mated with a Macintosh PowerBook notebook computer, In Control keeps users up-to-date even when away from the office.

In Control is for anyone who needs to manage many ever-changing details. It lets users quickly and easily view to-do items from a variety of perspectives, such as deciding what to do next, preparing for a one-on-one meeting, or choosing to whom a task should be delegated. Users can sort or reassess items by priority, date, or any other criterion. Or users can focus on just a few tasks, such as those delegated to a co-worker. In addition, In Control affords the full power of an outliner to organize, collapse, and indent to-do's.

In Control's authors, Dan Chadwick and Alan Albert, previously created FileMaker, the best-selling database noted for its power and ease of use, which is now owned by Claris Corporation. "FileMaker proved that powerful can still be simple. With In Control, we focused even more on simplicity and out-of-the-box usefulness. New users will be organizing their projects in just minutes," said Chadwick.

Priced at \$129.95, In Control will ship from January 1992. The System 7-friendly application includes Balloon Help, on-line help and ready-to-use templates. It has an extensive icon bar; most commands are just a click away.

Data can be quickly entered using either the keyboard or mouse. In Control can automatically complete entries when just the first few letters are typed. Using Apple's XTND technology, In Control exchanges information with a variety of popular word processors, spreadsheets, and databases.

Clocktower

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Ilci CACHE-IN £260 CACHE-IN 50MHz £call

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FROM £340 1Mb

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Sony bulk 3.5" DSDD from 52p HD from £1 20

Apple Preformatted 3M Boxed 10s DD £6 00 HD £11

These disc prices are while very limited stock last

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Apple branded £8.25

Original and compatible supplies for any make of printer, copier or fax machine, call for quote

ImageWriter ribbons black £1.85 each in 10s

See advertisement earlier in this magazine for more products and offers

Clocktower

84a Weston Park, Crouch End London, N8 9PP.

Tel. & Fax: 081-341 9023

Callers welcome, BUT PLEASE PHONE FIRST!

AppleTalk Remote Access

With AppleTalk Remote Access you can access file-sharing features over the telephone lines

AppleTalk Remote Access lets your Macintosh communicate with another Macintosh or AppleTalk network over standard telephone lines. Once you've called into the remote computer, you can use the file-sharing feature of System 7 to access files. You can also print to an AppleTalk network printer connected to the remote computer. Your computer can answer calls as well as call another Macintosh. When you call into the AppleTalk network, all the network services are available to you remotely. You can check electronic mail, view your calendar, or retrieve data from a database. It doesn't matter what type of AppleTalk network you use. You can call into a LocalTalk, Ethernet, or Token Ring networks.

AppleTalk Remote Access Features:

- Easy to set up and use

- Integrated software combines calling and answering
- No specialised networking knowledge required
- Remote services accessed the same way as local services

- Multiple security levels
- User-specified options
- Network-wide control

- High performance
- Optimised for modems
- Industry-standard data compression and error detection built in
- Increased efficiency with new smart buffering technology from Apple

- No special hardware necessary

- Works on any System 7 Macintosh
- Broad range of modem support
- Functions over standard telephone lines

AppleTalk Remote Access Details

AppleTalk Remote Access provides an asynchronous AppleTalk connection through a modem to another Macintosh and its AppleTalk network. The remote user can access all the AppleTalk services such as mail, calendars, file servers, and printers. This software can act as client or server. The software is meant for personal use, and it is easy to set up and configure. It supports one connection at a time.

For optimum performance, Apple recommends using a V.32 capable 9600 bps or faster modem. A 2400 bps modem provides satisfactory access to on-line mail services or calendaring systems. Connection speeds slower than 2400 bps are likely to cause AppleTalk to time-out between packets. The software supports connection speeds of 2400, 9600 and 19200 bps.

It requires System 7 or later, but runs on any CPU capable of running System 7. AppleTalk Remote Access

supports built-in serial ports, not serial cards. AppleTalk Remote Access behaves as a node on its local network as well as the remote network, and has access to all services on both networks. As a client on the remote network, it doesn't allow the rest of the remote network to gain access to its local network. In other words, it doesn't create two-way access between networks.

Components

- Remote Access Application

- This is the main application that performs these functions:

- Sets up the connection documents
- Views the status and activity log
- Initiates or terminates a remote connection
- Enables call answering (Calls are answered whether or not the application is open.)

- Remote Access Setup

- This is a control panel device (cdev) that is normally the first component used after installation. It is used to do the following:

- Select the modem type and modem port.
- Allow incoming calls.
- Set the duration of a connection.
- Enable access to the attached network.
- Control the modem speaker.

- Users & Groups File

AppleTalk Remote Access uses System 7 file sharing to control access. It uses the same user name and password entered in the file sharing Users & Groups file. You enter the call back phone number here. If installed on an AppleShare 3.0 file server, the file server's Users & groups file controls access.

- Connection Document

A blank connection document appears when you double-click the Remote Access application. AppleTalk Remote Access uses the document when initiating a connection. The connection document specifies the caller's name, password, and phone number of the server Macintosh. You can save all the configuration information to use later. You can choose whether to save the password with the connection document. You can also set the time interval between reminders that the connection is still active. This is helpful if you're concerned about phone charges. The default is no reminder.

- Status Window

This window shows the current status of AppleTalk Remote Access with the following messages:

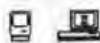
- "Idle..." when no connections are present or being attempted
- "Waiting to answer incoming call..." when ready to accept calls
- "Waiting for call back..." or "Dialing..." to show the stage of making connection or answering a call

- Activity Log

This maintains a log of incoming and outgoing calls and connections. The data wraps after 1000 entries. For auditing and tracking, you can cut and paste the data into spreadsheets or databases.

- Network adev (Remote Only)

The Remote Only adev is installed in the Extensions folder and appears in the Network cdev. You can disconnect



from the local network and see only the remote network. Here are two situations where you might need to do this:

- In the event of a network number conflict:

When a resource on the remote network has the same number as a resource on the local network, you can access the remote resource using the Remote Only adev.

- Only a printer port, and no other network connections:

When you must use the printer port for something other than AppleTalk, you can use the Remote Only adev to free up the printer port. For example, a non-networked Macintosh with a serial printer connected to the printer port and a modem connected to the modem port.

- Other Additions to the Extensions Folder

The installation process places the modem Connection Control Language (CCL) scripts in the Extensions folder. The scripts appear in the pop-up menu in the Remote Access Setup cdev. Installation also places the AppleTalk Remote Access and MNPLink Tool extensions in the Extensions folder. These extensions create and maintain a reliable connection.

Security

AppleTalk Remote Access implements security in several ways:

- Macintosh Level Security

You can implement security from the Macintosh in these three ways:

- Assign each user a password in the User record in the Users & Groups file. When receiving a call, the password goes through a DES encryption and authentication procedure similar to AppleShare.

- Set AppleTalk Remote Access to call the user back at a predetermined number. If an unauthorised caller discovers a password, the call-back number will connect only the authorised phone number.

- Disable access to the network so the caller can't see beyond the server Macintosh. Turn off file sharing to deny access to the server Macintosh as well.

- Network Level Security

The network administrator can set up a Security Zone using a HyperCard stack. The Remote Access Setup cdev detects this Security Zone, and requires a password to answer incoming calls. Unauthorised AppleTalk Remote Access servers can grant access to a network only after clearance from the network administrator. The AppleTalk Remote Access application must be open to see the connection document, status window, and activity log. The other components are independent of the application.

Technical Specifications

Operating Requirements

- System software version 7.0 or later
- A Macintosh Plus or later model with at least 2MB of memory
- AppleTalk Remote Access must be installed on both the calling and answering side
- An Apple or Hayes-compatible modem (2400 bps minimum; 9600 bps recommended) on both the calling and answering side
- Appropriate modem cable Modem Support and Scripts Remote Access can work with any Apple 2400 bps or any Hayes-compatible 2400 bps or higher-speed modem with the appropriate script.

Modem scripts for many popular modems are included with AppleTalk Remote Access:

2400 bps modems

Apple Data Modems
Abaton InterFax 24/96
Global Village TelePort
Hayes SmartModem 2400
Microcom Microport 1024
Practical Peripherals 2400SA
Prometheus 2400M
Supra SupraModem 2400
US Robotics Courier 2400e

9600 bps modems

DSI 9624LE/LE Plus
Hayes Ultra 96
Farallon Remote V.32
Microcom MacModem V.32
MultiTech MultiModem V.32
Practical Peripherals 9600SA
Prometheus ProModem Ultima
Telebit T1600
US Robotics Courier V.32bis

Additional scripts may be available. Contact an authorised Apple reseller or representative for more details.

If you understand connection control languages (CCLs) and are an experienced programmer, you may be able to write the necessary modem script yourself. The AppleTalk Remote Access Modem Toolkit includes everything you need to write these scripts.

Network Types

It doesn't matter what type of AppleTalk network you call into with Remote Access. It can be:

- LocalTalk
- Ethernet
- Token Ring

Error Detection/Data Compression

AppleTalk Remote Access has several built-in components that allow for error-free delivery of compressed data optimised for modem connections.

Performance

Spreadsheets, texts, and files with redundant data can be compressed more efficiently than certain other files (such as programs) and can therefore be transferred at much higher rates.

Status Information

The Remote Access Status window lets you view a variety of information during a connection: progress of connection, name of the Macintosh to which you're connected, length of time the connection has been active, amount of time left.

Specifications

- User name maximum length = 31
- Password maximum length = 8
- Maximum connect time = selectable
- Maximum Activity Log entries = 1000
- Password attempt retry limit = 7

Licensing

The license accompanying AppleTalk Remote Access allows a single user to make up to a maximum number of 3 copies of the AppleTalk Remote Access software for use on Apple computers owned and/or operated by that user.

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Downloaded from AppleLink



MacX25 1.0.1

Software for linking Macs to packet-switched data networks

Apple Computer's MacX25 1.0.1

Apple Computer, Inc. is shipping its updated software for linking Macintosh computers to packet-switched data networks (PSDN) supporting the international OSI and CCITT X.25 recommendation for enterprise-wide communication.

Apple's MacX25 version 1.0.1 is now available for Macintosh computers running System 6 or System 7 system software, supporting any Macintosh as an X.25 client and all Macintosh II computers as servers. System 7 offers a range of services for networking, including file sharing and interapplication communication. To ease customers' transition to using X.25 in the newer system software environment, MacX25 version 1.0.1 retains the same set up configuration and does not alter the interface used in MacX25 version 1.0. Access to host computers and end-user services on the PSDN is distributed from a MacX25 server to Macintosh computers over the AppleTalk network system.

For improved communication with European networks, MacPAD (the client side of MacX25) now supports 8-bit characters. Support for 8-bit characters—in which such symbols as the German ä, French ç or Spanish ñ are encoded—enables businesses on both sides of the Atlantic to transfer data files transparently and communicate in the appropriate European languages.

The new MacPAD also offers new features for flexibility in communicating across the X.25 network, including the ability to negotiate throughput parameters and the size of packet windows. In addition, because it is implemented as a connection tool for the Communications Toolbox, MacPAD allows third-party applications, including terminal emulators, to connect to host systems over the X.25 networks.

The MacX25 Programming Library, available separately for third-party developers, works in conjunction with the MacX25 server to provide X.25 access to applications. This enables developers to create Macintosh solutions giving users access to PSDNs. The library, which remains unchanged in the new version of MacX25, consists of a toolkit for such routines as initiating and terminating contact with the MacX25 server, establishing and closing down a virtual circuit and passing data across an established circuit.

For example, an application developed in Italy uses tools in the MacX25 Programming Library to provide Macintosh-to-host access across an X.25 network. List SpA, headquartered in Pisa, developed a cost-effective interbank trading network for the Italian banking system that enables Macintosh computers in each bank to connect to the system's mainframe over the X.25 network.

The manufacturer's suggested retail price (MSRP) for MacX25 version 1.0.1 Server kit, which also includes the MacPAD client software and updated documentation, is \$800 U.S. MacX25 version 1.0.1 upgrade will be sent at no additional charge to existing owners of MacX25 version 1.0 in the U.S.. A Macintosh running the MacX25 version 1.0.1

server software requires an Apple Serial NB Card. The MacX25 Programming Library, used by developers of third-party X.25 applications for the Macintosh, remains unchanged.

MacX25 1.0.1 is available in the United States through the Apple Programmers and Developers Association (APDA). Outside the U.S., MacX25 version 1.0.1 is available to developers through APDA and to end-users through Apple dealers. For product ordering information, contact APDA at 800-282-2732 (U.S.), 800-637-0029 (Canada), or 408-562-3910 (Elsewhere).

The international version of MacX25 version 1.0.1, which will allow the English language version of MacX25 to run on foreign-manufactured Macintosh systems, will be available in Europe shortly.

Background

Apple's MacX25 conforms to the Open Systems Interconnect (OSI) model and Consultative Committee on International Telephone and Telegraph's (CCITT) X.25 recommendation for communication with packet-switched data networks (PSDN). Because of their cost-effective use of leased lines to transmit information over long distances, X.25 PSDNs offer an increasingly popular means for electronic communication internationally.

MacX25 consists of server and client software. The MacX25 server software allows a Macintosh on an AppleTalk network to be set up as a single entry point to the PSDN. Server-based access reduces the cost of global connectivity by maximising use of expensive resources, such as leased lines. MacPAD client software works in conjunction with the server software to provide packet assembler/disassembler connectivity to the PSDN.

MacX25 features a graphics-based administrator's application that facilitates configuration and administration of the server. An address service allows administrators to set addressing details on the Macintosh server.

Running the server component of MacX25 1.0.1 under System 7 requires 4 Mbytes of RAM; the client side needs 2 Mbytes. To run MacX25 1.0.1 server software with System 6.0.7 requires 2 Mbytes of RAM; the client side needs 1 Mbyte.

MacX25 supports the following standards and recommendations: CCITT X.25 1980 and 1984 versions and Packet Assembler/Disassembler (CCITT X.3, X.28 and X.29).

MacX25 Server Software

MacX25 software links Apple Macintosh personal computers to packet-switched data networks (PSDN) supporting CCITT Recommendation X.25. MacX25 server software allows a Macintosh to be set up as a single entry point to the PSDN. Access to host computers and end-user services on the PSDN is distributed from the server to Macintosh computers over the AppleTalk network system.

MacPAD software, included with MacX25, works in conjunction with the server software and provides packet assembler/disassembler (PAD) connectivity to the PSDN. MacPAD is implemented as a connection tool for the Macintosh Communications Toolbox, and it allows terminal applications using the toolbox to connect to host systems on the PSDN.

MacX25 features an administrator's application that facilitates configuration and administration of the server. An address service allows administrators to set addressing details on the Macintosh server, presenting MacPAD users with a menu that lists available hosts and end-user services by name. Users connect to services simply by selecting the appropriate name—they aren't required to know PAD com-



mands and address numbers.

The MacX25 Programming Library (available separately) works in conjunction with the MacX25 server to provide X.25 access to applications, enabling developers to create Macintosh solutions that give users access to packet-switched networks.

Features

- X.25 network access
- Conformance to International Telegraph & Telephone Consultative Committee (CCITT) recommendations.
- System software version 6.0.7 and version 7.0 support.
- Server-based access
- Packet assembler/disassembler facility (MacPAD)
- Transfer of 8-bit characters using MacPAD
- Easy-to-use Address Book with graphics based user interface
- Graphics-based Administrator application
- User passwords

Benefits

- Provides Macintosh computer users with reliable wide area network connectivity.
- Provides universal interoperability with other X.25-conformant systems.
- Makes it easy to migrate from version 6 to version 7.
- Makes it easy to add and administer users.
- Reduces costs by maximising use of expensive resources such as leased lines.
- Supports asynchronous terminal access to packet-switched networks.
- Allows use of MacX25 on international sites with European languages.
- Allows users to select an available service by name without having to learn traditional PAD commands.
- Facilitates software installation and administration of user access
- Prevents unauthorised users from accessing the server

MacX25 Includes:

- MacX25 Server software
- MacPAD software
- MacX25 Administrator's Guide
- MacX25 User's Guide
- The Update to MacX25 (document)

MacX25 Programming Library Includes:

- MacX25 Programming Library Software
- The MacX25 Programmer's Guide

Apple Serial NB Card*

*To use the Apple Serial NB Card, you need one of the following cables:

- RS-232-C Cable
- V.35 Cable

MacX25 Server Software Technical Specifications

System Requirements

To set up a MacX25 server, you need

- Any modular Macintosh computer with an internal hard disk and at least 2 megabytes (MB) of memory for system software version 6.0.7 and 4 MB of memory for version 7.0
- Macintosh system software version 6.0.7 (or later) or version 7.0
- An Apple Serial NB Card with the appropriate RS-232-C or V.35 cable

- The appropriate cable connectors

To use MacX25 on an Ethernet or a token ring network, you need the appropriate interface card for your Macintosh.

To use MacPAD, you need

- A Macintosh Plus computer or later model with at least 1 MB of memory for version 6.0.7 and 2 MB of memory for version 7.0
- A terminal-service application that uses the Macintosh communications toolbox
- The appropriate cable connectors

To use MacPAD on an Ethernet or a token ring network, you need the appropriate interface card for your Macintosh.

Product Details

General Features:

- MacX25 supports
- CCITT 1980 Compatible Mode
- CCITT 1984 Compatible Mode
- Packet Assembler/Disassembler (X.3, X.28, and X.29)
- Operation as a DTE
- Operation as a DCE
- Virtual Circuits: 64 maximum
- A single link for each Apple Serial NB Card
- Multiple cards for each modular Macintosh
- Operation at up to 19.2 Kbps with RS-232-C
- Operation at up to 64 Kbps with V.35
- Multiple servers for each AppleTalk network system

MacX25 does not support

- Permanent Virtual Circuits
- X.32 switched circuit operation

Network Certification:

MacX25 is certified for connection to Telenet, GEIS (GEISCO), and Tymnet networks; and in Europe, for Austria (DATEX-P), France (Transpac), Germany (DATEX-P), Italy (ITAPAC), the Netherlands (Datanet-1), Norway (DATAPAK), Sweden (DATAPAK), and Hong Kong (DATAPAK). In addition, MacX25 can be used to connect to the public PSDN in Australia (Austpac), Canada (DATAPAC), Denmark (DATAPAK), and Switzerland (Telepac).

MacX25 Programming Library:

The MacX25 Programming Library allows developers to create software solutions that provide users with access to a packet-switched data network. It works in conjunction with the MacX25 server to provide X.25 services to application programs. The library is a toolkit, or collection of C language routines, that offers a high-level program interface for applications. Routines are included for initiating and terminating contact with the MacX25 server, establishing and closing down a virtual circuit, passing data across an established circuit, and more. Technical support is available to Apple Partners and Associates.

To order products or get information, contact:

- APDA
- Apple computer, Inc.
- 20525 Mariani Avenue, M/S 33-G
- Cupertino, CA 95014-6299 USA
- 408-562-3910 (International) 408-562-3971 (Facsimile)
- 171-576 (TelEx) APDA (AppleLink Address)

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AppleShare Server 3.0

File and print server software

AppleShare Server 3.0 is file and print server software that lets AppleTalk network users share information and access network printers. A Macintosh can become a network server that provides shared file storage for up to 120 concurrent users, and queued access to 5 network printers. AppleShare 3.0 supports the multitasking feature of System 7 so other servers and application programs can run at the same time as AppleShare on one Macintosh.

Additions to this release of AppleShare include:

- Enhanced password security
- Administrator messaging
- Application launch control
- Print spooling
- AppleShare File Server allows Macintosh, Apple II, and MS-DOS computers to access the same documents. AppleShare also allows background printing on networked LaserWriters or ImageWriters.
- Features - Multiple Services
 - Supports System 7 multitasking
 - Includes File and Print Servers

Enhanced Administration Capabilities

- Expanded password control
- Administrator controlled log-off
- Application launch count
- Server messaging to any user

More Sharing Options

- Up to 120 simultaneous users
- On-line CD-ROM exchange
- Share folders on entire disks

Benefits

- Client software built into every Macintosh
- Easy server selection through the Chooser
- Intuitive, consistent access to shared resources
- Users control access to their own information
- Support for Macintosh, Apple II, and MS-DOS computers

AppleShare 3.0 Server New Features

AppleShare 3.0 replaces the existing AppleShare File Server and AppleShare Print Server, and one package contains the file and printing services. It requires System 7. Memory and available CPU cycles determine the limit for running other applications on the same computer. AppleShare 3.0 is 32-bit clean and virtual memory compatible.

AppleShare Print Server

This application runs under MultiFinder, and manages access of up to five networked printing devices. You install it in the System Folder with the ImageWriter Emulator (IWEM). All known bugs in the previous version have been fixed. AppleShare File Server AppleShare 3.0 requires a

Macintosh Plus or larger computer, with a recommended minimum of 4MB of RAM. Apple tested the server on the portable CPU line for basic functionality only. Apple hasn't tested for stress on portables running as AppleShare servers.

New Features

- General

The maximum number of connected users has been increased from 50 to 120, although the default setting is 50. The practical upper limit for connected users is probably less than 120 for reasonable response time. Also, the Hierarchical File System (HFS) limits the number of open files to 346. The administrator can tune the performance of the server using the slider in the Connected Users window. Setting the slider to 100% allows the server to access 100% of the available CPU cycles. This doesn't lock out any other running application. Set to 50%, the server uses every other available cycle from the CPU. This is true whether or not the other 50% are used by an application.

The default for Guest access is Off when installing AppleShare 3.0 on a new system. When upgrading an existing server, Guest access is set to the existing setting.

Maintenance of the Parallel Data Structure (PDS) is a continuous background task instead of a startup task. This change has these benefits:

- Faster server start up
- Improved integrity of the PDS: Many other applications can run on the same CPU increasing the chance of a server crash.
- Ability to support removable media: The administrator can mount or unmount volumes while the server is running.

- Sharing Volumes and Folders

You can share an entire volume or selected folders. You can mount a maximum of 50 volumes on the AppleShare server, and share a maximum of 50 entities (volumes or folders).

When a remote user creates a new folder, the folder inherits the access privileges of the surrounding folder or volume unless explicitly changed by the owner. Access privileges used to default to owner only.

When the administrator creates a folder in an area that isn't shared or exported, the folder takes on the access privileges of the surrounding folder when dragged to a shared area. When the administrator moves this folder from the shared area to a new folder, the moved folder takes on the privileges of the new enclosing folder. Folders have this property of dynamic access privileges until the administrator assigns explicit privileges to the folder.

You can interchange Users and Groups so that a User who is not in a Group can share an entity along with the Group, and more than one User can own the same folder. A User can belong to 42 groups. The limit used to be 16 groups. You can create over 8000 Users or Groups, but the recommended maximum is 2000.

- Administrative Functions

• Maximum Remote User Activity Meter

The administrator can customise the response time using the Maximum Remote User Activity meter. AppleShare File Server activity affects the performance of other applications and services running on the server, and vice versa. The administrator can change total system performance using the Maximum Remote User Activity meter. Changes take effect immediately. The default setting is 100%.

• Messages

The administrator can write messages up to 199 charac-



ters long, and send three message types:

- Greeting Message

AppleShare displays this message at log-on time to inform users of server contents, backup policies, or other news.

- User Message

The administrator can send a custom message to a User or Group.

- Disconnect User

The administrator can send a message to a group of connected users explaining the reason for shut down or the time service will be restored. The administrator can disconnect a user or group of users without bringing the server down. Disconnection can happen immediately or after a designated time interval.

- User Dialog Box AppleShare 3.0 allows multiple super users. In the User dialog box, check the All Privileges Enabled box to give full access to all exported entities. The User dialog box also has a Program Linking Enabled check box to allow IAC events. This dialog also controls AppleTalk Remote Access.

- File Server Preferences Dialog Box

The administrator can ensure network security with these choices in the File Server Preferences dialog box:

- Set the maximum number of connections. The maximum is 200 and the default is 50. Restart the server to see the new number take effect. AppleShare allocates 2K of memory at startup for each connection.

- Set the minimum number of characters in a password. Eight characters is the maximum and zero is the default.

- Set the number of days until a password expires. When the password expires, users get a prompt to enter a new word if they have the privilege to change passwords. For a temporary account, set the number of days until expiration for the duration of the account and deny the change password privilege.

- Set the maximum number of failed log-on attempts. This disables the account when someone tries multiple random passwords to gain access. The administrator must reactivate the account.

- Require a password at startup time. This disables the "Save my name and password" option in the Chooser dialog that allows a choice of servers to mount at startup time.

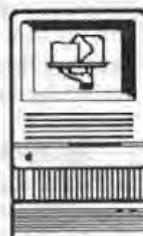
- User Setup Dialog Box

The administrator can force a user to change a password the next time they log on. This is useful when creating several users and giving simple default passwords, such as initials.

- Access Information Dialog Box

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My House

New Laureate Program Trains Language of Daily Living

My House: Language Activities of Daily Living, a new program from Laureate Learning Systems, is designed to help children or adults with severe communication impairments understand and express the language they are likely to encounter in their everyday lives. It encourages discovery, learning, and communication about objects and activities of daily living.

This talking program contains six scenes that represent typical rooms in a house: bedroom, bathroom, dining room, kitchen, living room, and utility room. Users explore over 100 objects and their functions in realistic settings. Within each room, there are four activities designed to increase understanding and use of functional vocabulary and word functions. In the Discover Names and Discover Functions activities, the user selects an object and the computer says its name (eg. "This is the stove.") or function (eg. "You use the broom to sweep the floor."). In the Identify Names and Identify Functions activities, users are asked to find various objects according to their name (eg. "Find the sink.") or function (eg. "Where do you put garbage?").

My House: Language Activities of Daily Living is available for the Apple II series, Apple IIGS, and IBM computers. The program can be accessed using a keyboard, TouchWindow, single switch, or mouse. Since 1982, Laureate has been dedicated to publishing software for special education and rehabilitation. Programs cover language development, cognitive processing, augmentative communication, reading, and instructional games. For a free catalog or software recommendations, contact Laureate Learning Systems, Inc., 110 East Spring Street, Winooski, VT, 05404, call (800) 562-6801, or link DO900.

Laureate Offers Free Book on Special Needs Software

Laureate Learning Systems, Inc., a leading publisher of special education software, recently published a new book, **Sequential Software for Language Intervention**. This book is designed to help speech-language pathologists, special educators, school administrators, and parents select software to meet the needs of children and adults with language impairments. Author Dr. Mary Sweig Wilson discusses seven stages of language development from birth to adulthood. Language characteristics and training goals for each stage are described in detail. You'll learn about software products that can help your students improve their language skills at every stage of language development. Since 1982, Laureate Learning Systems, Inc. has been dedicated to publishing innovative software for special education and rehabilitation. Laureate's award-winning talking programs cover language development, cognitive processing, augmentative communication, reading, and instructional games. For a free copy of **Sequential Software for Language Intervention**, contact Laureate Learning Systems, 110 East Spring Street, Winooski, VT, 05404, call 1-800-562-6801.



Committee Member Self Portrait

John Arnold, DLC (Hons.),
B.Sc. (Eng.), B.Sc. (Hons.)

As a student, I went to Loughborough College of Advanced Technology (as it was then), and obtained Honours in Aeronautical Engineering, simultaneously getting a BSc (Eng.) in the same subject from London University. I am still wondering to this day why the London degree for Aeronautics included a paper in steam engines! The next stage was a job at Armstrong Whitworth, doing structural analysis for guided weapons.

Using computers at that time was something of a luxury, but I remember programming in something called Autocode, and having seemingly miles of punched paper tape which wouldn't always stay in the neat roll in which it was meant to be. When the interesting jobs dried up at Armstrong Whitworth, I left to go to Luton College as a Mathematics lecturer.

My first lecture was somewhat unusual in that I had been told what I was expected to teach (the first year of a course: fractions — all prepared, as it was the first lecture I had ever given). However, when I got to the class I discovered I had been given the wrong information and that in fact it was the fifth year, and they expected things like hyperbolic functions. Having had to give that lecture with no preparation whatsoever and survived, things never looked quite so bad again!

In those days, we had to teach a reasonable range of mathematical topics and I felt the need to have a mathematical qualification. So I studied part time in London one day a week for five years to get a BSc in Special Mathematics. In those days (around 1970), it was still possible to get a mathematics degree without computers being mentioned anywhere on the course. Having got the degree I was only able to use a very small part of the mathematics I had studied, in the mathematics I was teaching. I had an interest in programming, starting with Autocode, progressing on to Algol, then Fortran, and then (when the college bought its own DEC) we had to change to Basic, which I didn't think too much of initially. However, over the years I had more Basic programming classes than for any other language.

My interest in Apple machines started when the department bought an Apple II and the supplier said he had a machine available second-hand. It seemed unbelievably expensive (so what's changed, I hear you say!), but with the help of the Bank Manager we were able to purchase it. The first printer we owned was the Apple Silentype.

A colleague suggested that we both went to an Apple computer club meeting he had heard about. The meeting was, he thought, in Park Street, St. Albans in the Old School. We arrived in the said street, we walked up and down the length of that street but no old school building could be found. We asked, without initial success, until someone suggested that perhaps we were looking for Park Street Village near St. Albans.

We were late for what was, I think, the first meeting of BASUC with John Sharp and David Bolton in charge. This

was in November 1980. Norah, who at that time had already begun to dominate the Apple, came along to the second meeting. No doubt her profile, which she has cleverly avoided writing up to now, will reveal her subsequent activities in that field.

The memories I have of those early days were of the extreme enthusiasm of the members, seeking every bit of information they could lay their hands on, and the bi-monthly magazine posting get-together, where 'volunteers' were allocated the tasks of rolling the magazines, wrapping and sticking address labels around them. I still remember the frustration, as the magazines unrolled themselves before our very eyes — just as we thought we had finished!

At a club meeting held in Hatfield one Saturday, I can remember being somewhat impressed by a new machine that Apple had brought along for us to play with. Norah was into graphics at that time and decided that she couldn't possibly survive without one. The machine was, of course, the Macintosh. The Bank Manager had to be approached yet again, and we got our 128K Mac. At the time, we thought 128K was an incredibly large amount of RAM. The only programs available were MacPaint and MacWrite, and horror-upon-horrors it had no built-in language! We couldn't afford the second machine that Apple expected you to buy if you actually were foolish enough to want to program it. Eventually the board was updated to 512K and then to 1Mb, and still there were programs needing even more memory in which to run.

I tried programming in Forth, Basic, and then learnt some Pascal. I had already been using it on the Apple, and then got caught teaching it for a couple of years to Biology students. Unfortunately, nowadays all anyone wants is instruction on how to use packages — and suddenly what was quite interesting has become unbelievably boring. I have bought both Think Pascal and Think C and have recently had them updated (I am still waiting for that to happen to my Mathematica), but have not yet found time to get to grips with the new features of either.

For years I managed to avoid actually being a member of the committee, but was eventually co-opted, and worse, persuaded that I wanted to run the Macintosh Hotline. I keep hoping someone more interested in technical matters than I will shove themselves forward for that task — I live in hope! Sometimes there are satisfied customers and sometimes there aren't. There is not too much I can do when someone rings up with a problem with a specific program, I've never seen, running on a type of Macintosh I've never used. That is why we are constantly seeking new names to add to our list of 'experts' who can be called upon to answer any specialised questions. (Any more volunteers, please???)

Together with Norah, I still run our local monthly meetings in the same building that the Apple2000 group started in. However, it is increasingly difficult to get people to even suggest topics for the meeting — let alone actually give a talk about something. No doubt other groups are finding the same problems. We do however have a few individuals willing to bring their machines along (thanks, Richard!).

Yet another deadline calls, it is already much too late. As a true computer enthusiast, I have written this with pencil on paper and now have to type it in. I might have expected that having used a computer for twelve years or so, that my typing speed would have increased. I used to use one finger, now I use two, but the speed hasn't doubled!

I am, at the moment, Senior Lecturer in Mathematics in the Faculty of Applied Sciences at Luton College of Higher Education. My hobbies include woodcarving, calligraphy — oh, and books, books, and yet more books!



Preston's AppleCentre is in the Village

With fewer than 60 AppleCentres throughout the UK, you could be forgiven for thinking that they must all be in the bustling commercial centres of major towns and cities.

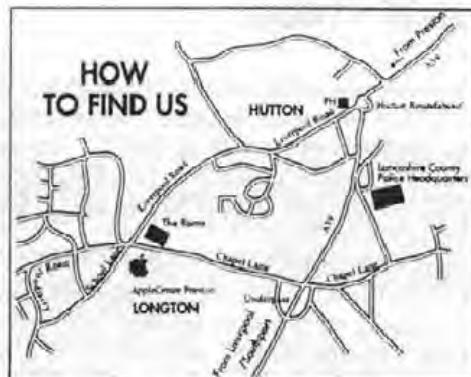
The truth is, most of them are — but Preston's AppleCentre is different. Situated in the picturesque country village of Longton, with private parking just a few feet from the front door, customers can visit without collecting a ticket. Once inside they will be impressed, not only by the superb corporate AppleCentre decor, but also by the friendly reception and caring attention from Apple dedicated staff.

- Five complete Apple systems on permanent display
- Eight Workstations in our air-conditioned Training Centre
- Twelve Apple dedicated sales and support staff
- Special 'Quiet Room' facility
- The new low cost colour Macintosh now available from stock!



AppleCentreSM Preston

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Holdens Computer Services

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Preston, Lancashire, PR4 5EB.
Tel: (0772) 615512 Fax: (0772) 615919

OUR INPUT WILL IMPROVE YOUR OUTPUT

April '92 Diary : A.G.M.

The date and venue for the 1992 A.G.M. have been decided

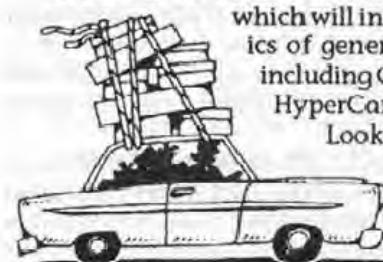
The Annual General Meeting of Apple2000 will be held on Saturday 11th April at 11 am in the Union Church Community Centre, 143 Ferme Park Road, London N8.

The building is on the corner of Ferme Park Road and Weston Park, N8 and the entrance is on Weston Park. (Those who attended last year will recognise that this is the same venue).

We look forward to meeting you at these events. All members are welcome — this is your opportunity to say how you think your Company should be run!

There will be a number of seminars in the afternoon, which will include presentations on topics of general interest to members — including Communications, MIDI and HyperCard.

Look out for more details, a map, travel advice, your proxy form and nomination form, with the March issue of Apple Slices.



April '92 Diary : MacWorld

Which Computer? Show includes MacWorld Expo

MacWorld Expo has been incorporated into the Which Computer? Show for 1992. The venue is still the National Exhibition Centre at Birmingham. The dates are 7th to 10th April, inclusive.

Apple2000 will be represented there, so please call in to see us — and ask any prospective new members to come along and join the Group.

The incorporation of the two exhibitions reflects the new Apple/IBM alliance, and is seen as a positive step by the industry in general. From an attendee's point-of-view, it is also welcomed as many have interests in several computer platforms.

The organisers have added solutions and innovations centres to The Show, each including a seminar theatre and a specific programme of events. This is intended to give the visitor more purpose and focus when visiting The Show.

The Corporate Forum has been developed to include an individual appointment service, for the benefit of visitors and exhibitors alike.

We shall be sending complimentary tickets next month — so there's no excuse, and we'll see you at The Show!

Claris Resolve

A review of Claris' spreadsheet package by Geoff Wood

My experience of spreadsheet programs goes back to 1980 with VisiCalc on an Apple II+. After struggling to write financial analysis programs in BASIC, I found VisiCalc a boon. But I soon came up against its limitations. I then tried SuperCalc, Multiplan, AppleWorks and other programs including a 1-2-3 clone.

When the Macintosh came out in 1984, I found the Mac version of Multiplan easier to use than the Apple II version, but when Excel emerged it fulfilled most of my dreams. Since then, I've updated to versions 1.5, 2.2 and now 3.0. Compared to VisiCalc, Excel 3.0 is incredible.

But how does Claris's Resolve compare with Microsoft's Excel? The short answer is that if you have already bought Excel 3.0, you don't really need Resolve. And if you use Word 4 rather than MacWrite, you may prefer Excel for compatibility. But if you use MacWrite and/or other Claris programs, you may be better off with Resolve.

In the first draft of this review I set out to compare all the main features of Resolve and Excel. I soon realised that the review would be far too long. Instead, I have listed the good features of Resolve that I would like to have on Excel. These are followed by some of the shortcomings of Resolve when compared to Excel.

To keep the review down to a reasonable length, I have left out discussion of the database features (which are similar on the two programs) and Resolve's scripts, which achieve similar results to Excel's macros.

First, Resolve is cheaper than Excel. Its recommended price is £275 compared to Excel's £345. Discounted prices are about £175 and £245 respectively. Claris have special offers if you buy other Claris programs or trade in another spreadsheet program.

Resolve is a smaller program than Excel. It occupies 944K on disc compared to Excel's 1.2Mb. The suggested memory size is 1,024K; Excel's is 1,536K.

The manuals for Resolve have fewer pages than those for Excel 3.0. Resolve's manuals have 671 pages; Excel's have 1,025.

Resolve opens large files faster than Excel. A 320K Excel file took 15 seconds to open; the same file in Resolve opened in only 4 seconds. Resolve files take up less space on the disc; the 320K Excel file was only 197K in Resolve. It saves faster, too. It took only 4 seconds for this file, compared to Excel's 18 seconds.

If you make changes to a Resolve worksheet, its name in the Window menu is underlined. After saving, the worksheet name is no longer underlined and the Save command is dimmed. When you use the Command-S shortcut for Save, it beeps if the worksheet does not need saving; Excel wastes time saving the file again even when there are no changes.

Resolve has an Auto Save command that can be set to save a backup of a worksheet at regular intervals from one minute upwards. This command adds the suffix .back to the end of the file name, thus saving a backup copy separately

from the normal name. You can specify a pathname, so the backup copy could be saved on a different disc.

The Claris tool palette offers more drawing tools than Excel's tool bar. As well as the line, arc, rectangle and oval tools, it has a tool for drawing polygons.

The tool palette also displays a set of three icons to change the fill patterns and/or colours. There is another set of three icons to change the line patterns and/or colours and yet another icon to change the line width. With Excel, you must use the Patterns command in the Format menu to change the pattern and/or colours in a cell.

Resolve offers 64 patterns; Excel offers only 18. Both programs normally offer 16 colours for the background and foreground of the patterns but with a colour monitor set to 256 colours, the Claris palette shows 81 colours; Excel still shows 16.

Resolve's line pattern icons change the pattern, the colour and/or the width of the lines that appear between the cells. So you could have thick lines in red/yellow brick pattern around every cell. I'm not sure what useful purpose this would serve.

At the left hand end of the horizontal scroll bar, Resolve displays the Zoom icons used in other Claris programs. You can zoom up in steps to 400% or down to 25%. The latter is handy for a quick overview of a large worksheet.

With Resolve, each worksheet has its own entry bar. So if you have two or more worksheets visible on the screen, the entry bars display the contents of the active cell for each worksheet. With Excel, the entry bar shows only the contents of the active cell of the active worksheet.

When you drag the vertical scroll box in Resolve, a box appears near the scroll bar to show the row number of the row that will be at the top of the worksheet when the mouse button is released. Similarly, when you drag the horizontal scroll box, a box appears just above the scroll bar to show the letter(s) of the column that will be at the left of the worksheet when the mouse button is released.

When I first saw this feature I wished that Excel had it too. Then I heard from Microsoft that the information is displayed in the Reference Area (at the left hand end of the Formula Bar). I asked other Excel users to see if they knew about it but none of them did and I could find no mention of it in the Excel manuals. We live and learn.

Resolve can sort rows or columns on up to four keys; Excel offers only three keys.

Resolve has a spelling checker. Many's the time I've printed out an Excel worksheet only to find a spelling mistake.

There's a command to remove all the page breaks. With Excel, you must do them one at a time or hold down the Command key to select several, then use the Remove Page Break command.

Resolve allows you to deselect non-contiguous selected cells. You can't do that with Excel.

Resolve offers keyboard shortcuts for Centre, Left and Right align. (With Excel, you can use the Tool Bar but there are no keyboard shortcuts.)

If you hold down the Option key and press the left or up arrow, Resolve puts the insertion point at the start of the text in the entry bar. With Excel, Command-U puts the insertion point at the end of the text (as Resolve does with Option-right or down arrow). There's no single command with Excel to put the insertion point at the start of the text in the entry bar.

It's easier to lock the titles with Resolve. You just select the column and/or rows, then use the Lock Titles command. With Excel, you must first drag the split bars into position.

It's easier to type numbers as text; you just type "1991.

With Excel you must type =1991" (or you can type Option-Space 1991 but the display then includes a space character which affects centre and left alignment). Resolve treats textual numbers as text, rather than numbers, so there's no danger of accidentally adding year dates into a formula.

Resolve has a Fill command that works with dates. So you can type January in a cell, drag down or across the next eleven cells and use the Fill command to display all the months of the year. The display is text, not numbers. With Excel, you would have to type 1/1 in a cell, format it as mmmm, then use the Series command to display the months. The displayed words are numbers, not text.

Names in Resolve can include spaces. If you try to put a space in an Excel name, it substitutes the underline character. Resolve won't let you delete a name if the name is in use in formulas. Excel allows you to delete a name that is in use, then it displays #NAME in the formula cells.

If you create a circular reference, Resolve tells you the references of the cell where the circular reference starts. Excel just says it can't resolve circular references, so you may need to use the Select Special command to find the precedents.

When you copy or cut some cells and display the Clipboard, Resolve shows the cell contents. The Excel clipboard only tells you how many rows and columns you have copied or cut.

The Find command allows you to find by criteria, e.g., any cell where the number is >1000.

In Resolve, the Go To command has many more options than in Excel which allows you to choose only cell references or named cells. With Resolve you can also choose to select Cell By Type (Active, Blank, Current, Error, Formula, Headings, Last, Locked, Text, Value), or Objects (Controls, Fields, Graphics, Notes), or Related Cells (All Dependents, All Precedents, Direct Dependents, Direct Precedents, References to Blanks, Unreferenced Cells), or Page Elements (Page Footer, Page Header, Print Range) or Data Ranges (Database Criteria, Range, Database Range, Distribution Bin, Distribution Values, Sort Range, Table Input Cell 1 or 2, Table Range). Excel offers some of these options with the Select Special command.

Resolve has a Worksheet Info command in the Edit menu that displays a dialog box whose main purpose is to allow you to set passwords for read/write and for read only, with an option to protect locked cells. However, this dialog box also shows the name of the file, the number of cells used and the number of cells with formulas. Excel offers worksheet and cell protection with or without passwords, but there is no easy way to count the number of cells used or the number containing formulas.

Resolve allows you to select all the row and column headings and then change the font, size, style and/or colour. In Excel, the row and column headings are always in bold in the normal style font.

Resolve cannot open Excel 3.0 files but it can open Excel 2.2 files. Excel 3.0 can't open Resolve files unless they are saved as Excel or Silk files.

Resolve has a quick way to set the width of one or several columns to the same width as an existing column. You just select the column(s) you want to change, then click on the right hand border of the heading of a column that already has the width you want. You can set the height of rows in a similar way. (With Excel, you could use the Column Width command to confirm the width of a column, then select other columns and use Command-Y.)

When you use the New View command in Resolve to display another window for the active worksheet, the second window retains any preset titles. In Excel, you must use the split bars to reset the titles in the new window.

In the Chart Gallery menu Resolve offers four types of charts not available in Excel. These are Polar, Wireframe, Contour and Surface charts. But Excel offers more preset options in the other types of charts, i.e., area, bar, column, line, pie, scatter and combination charts.



So much for the good points of Resolve. Now let's look at some of its shortcomings when compared to Excel.

First, it features my pet hate, pop-out menus (for formatting numbers and the font, size, style and colour and page breaks). Some people prefer pop-out menus to dialog boxes but I find them irritating.

To enter a formula such as =A4+A5+A6 in Excel, you can just type the = sign, then click on each cell. If you try this with Resolve, it puts commas instead of + signs between the cell references and it won't accept commas in this type of formula. You must type in the + signs.

Although both programs allow you to drag to make a column wider or narrower, only Excel displays the width in the Reference area (on the left of the Formula bar). However, Resolve lacks Excel's useful feature of double clicking the right border of the column heading to automatically adjust the width of the column (or several selected columns) to display the widest entry.

When you drag to select a block of cells in Excel, the Reference area shows how many rows and columns you are selecting. So it is easy to select, say, 52 rows and 7 columns to enter data for the weeks and days of the year. With Resolve, you must count the columns and rows, or guess and adjust.

With Excel, if you hold down the shift key, the Edit menu displays Fill Left and Fill Up instead of Fill Right and Fill Down. With Resolve, to fill left or up, you must use Copy and Paste.

Although Resolve has a keyboard shortcut for Bold (Command-B) it does not offer shortcuts for other styles. Excel offers keyboard shortcuts for bold, italic, underline, shadow and strikeout.

Excel allows you to add or remove a border on any cell by using Option-Command-arrow for left, right, top or bottom borders or Option-Command-o for outline borders. With Resolve you must use the Cell Borders command in the Format menu.

The Excel edit menu offers Command-Y to repeat the last command; Resolve does not have this handy feature.

Excel offers the Outlining feature that is so useful for displaying sub-totals, etc. Resolve has no such facility.

With Excel, you can type £1000 or £1000.00 to display these numbers; Resolve treats such entries as text. If you type 10%, Excel displays 10% with the underlying number as 0.1; Resolve just displays 0.1 in the cell. Both programs accept 1/1/91 or 1-1-91 or 1Jan or 1Jan91 as valid entries for dates but Resolve displays 1/1/91 for all these entries; Excel is clever enough to display 1/1/91, 1-1-91, 1-Jan or 1-Jan-91.

If you delete a cell or several cells, Excel allows you to choose whether to move the adjacent cells up or to the left. With Resolve, the adjacent cells always move to the left to

fill the gap. Similarly, if you insert some cells, Resolve always moves existing cells to the right; Excel lets you choose whether to shift them to the right or up.

Although Resolve has the very useful Fill command for entering consecutive dates or arithmetic progressions of numbers, it can't compete with Excel's Series command which can enter weekday dates (excluding weekends) or a series with any chosen interval or a growth pattern such as 2, 4, 8, 16, 32 etc.

You can select a block of cells in Excel by holding down the shift key and using arrow keys. In Resolve, shift-arrow moves the active cell to the start or end of a block of data or to the edge of the worksheet. (Excel uses Command-arrow to do this.)

When you enter a range in a Resolve formula, such as =Sum(A4..A12), you must type the two full stops; Excel allows you to type either a full stop or a colon but it always displays a colon e.g., =SUM(A4:A12). Both programs allow you to drag to enter a range but only Excel allows you to use the arrow keys to enter cell references or shift-arrow to enter a range.

Both programs allow you to link data on two or more worksheets by using external references. With Excel, you can just click on a cell in the supporting sheet to enter the name of that worksheet and the cell references in the active cell of the dependent worksheet. With Resolve you must type in the name of the supporting worksheet and the cell references. If you change the data in a supporting worksheet, Resolve does not update the dependent sheets automatically as Excel does. You must use the Calculate Now command to update the data.

More important, if you delete or insert some cells in an Excel supporting worksheet, the references of linked cells in any dependent sheets are changed automatically if necessary. Resolve does not do this. When you use the Calculate Now command in the dependent sheet, it just changes the value to whatever is now in that cell in the supporting sheet. To update the references, you must edit them by hand. This could be a mammoth task in a large worksheet with many references.

When you use the Cut command, Resolve immediately removes the data from the selected cells; Excel continues to display the data until you have pasted it in elsewhere. So if you use the Copy command accidentally instead of Paste after Cut (easily done with the keyboard shortcuts Command-C and Command-V), Resolve loses the cut data; Excel retains the data in the original cells. *This is surely a grave weakness.*

However, the Cut command does not always work properly. When you cut cells containing formulas and paste them elsewhere, any relative cell references should not change. But if the cells to the right of the cut cells contain data, Resolve treats the cut and paste like a copy and paste and changes the cell references. *This is a serious fault that Claris must surely put right if Resolve is to retain credibility with users.*

Excel's Paste Special command includes options to transpose data or to skip blanks. I could find no way of performing these operations in Resolve.

The Excel Display command in the Options menu allows you to suppress all zeros. There is no similar command in Resolve but you can create number formats to suppress zeros, as with Excel.

The Excel Find and Replace commands allow you to specify whether to look for the whole or part of a text string, number or formula and whether to match the case. Resolve's Find command can find part of a text string or formula but not part of a number, nor can it match case.

More important, Resolve has no Replace command for the contents of cells (but if the insertion point is in a text box, the Find command dialog box shows a Change To box with options for whole word and case). I use Excel's Replace command to change, say, part of selected formulas in a row or column; with Resolve this could be time consuming and prone to error.

Excel offers the Workgroup command so that you can save a Resume file to tell it which worksheets to open when you want to start work on the same set of worksheets again. There's no similar facility in Resolve.

When you lock a column and/or row as a title in Resolve, you can't use the arrow keys to move into the title column or row. If you click on any cell in a title column, the whole row is selected but the active cell is in the column next to the title column. You must unlock the titles before you can make changes in the cells of the title row or column.

With Excel, you can select, say, several cells in the title column and do a fill down or use the Series command. You can't do that with Resolve.

When you increase the size of the font displayed in an Excel worksheet, it automatically increases the height of the row. Resolve leaves the row height unchanged so the tops of the large characters are cut off. You must adjust the row height by dragging the bottom border of the row in the row heading or by using the Cell Size command in the Format menu.

In the Page Setup dialog box for Excel, you can specify the contents of the header and footer in many ways. So you can have a header that prints, say, the name of the company in Helvetica bold at the top left of the header and the name of the worksheet in Palatino underlined in the centre and today's date in Times italics at the right. In Resolve, a header or footer must refer to the contents of a cell on the worksheet so it is limited to one font, style and alignment. If you don't want the header/footer data to show on the worksheet, you must use the hidden format to suppress the display.

In Resolve, charts are always displayed on the worksheet; with Excel, charts can be on the worksheet or as separate, linked files. In Excel, you can create a chart without using a worksheet; you can't do that with Resolve.

A chart title in Resolve must refer to the contents of a cell on the worksheet; with Excel, you can just type the title in the formula bar of the chart.

In Excel, when you click on a column or data point, the formula bar shows the series command with the external references to the linked worksheet. You can edit the references if you wish. With Resolve, you must edit the data on the worksheet in order to change the chart.

Excel offers keyboard shortcuts to select a column (Command-spacebar) or a row (Shift-spacebar); with Resolve, you must use the mouse.

Excel allows you to wrap text on to two or more rows in a cell; you can't do that with Resolve.

Excel offers the Justify command to split a long text entry (that spills over into the next column) into two or more rows, or to combine text from several cells into one cell. There is no similar facility in Resolve.

Both programs offer a Paste Function command. With Excel, the Dialog Box shows the start of an alphabetical list of all the functions. You can find the one you want by using the scroll bar or by pressing the key (or keys) with the first (few) character(s) of the name of the function. For example, pressing S and Q in quick succession puts the SQRT() function in the entry bar.

With Resolve, the Paste Function dialog box normally displays a list of seventeen 'Business' functions ranging from Bondprice to Term. A pop down menu allows you to

change to one of nine other groups of functions, namely, Date & time, Logical, Statistical, Database, Text, Spreadsheet, Numeric, Operators and Names. To paste in the `Sqr()` function you would need to know that it is in the Numeric group (which has 35 functions). But if you press `S` to go there quickly, all you get is a bleep. You have to use the scroll bar or the down arrow key to select the function name.

A saving grace of Resolve is that when you use the Paste Function command again the dialog box displays the function you pasted last time. Excel does not remember which function you used before.

Excel offers an option in the Paste Function dialog box to paste in the argument. So if you use the `RATE()` function, it pastes `RATE(nper,pmt,pv,fv,type,guess)` with `nper` selected. You can then replace each argument with a value or cell reference. Resolve always pastes in the arguments and they are all selected so you must click on one of them to select it.

Excel's tool bar has other features apart from the tool icons. There are icons to change the font to Bold or Italic, icons to align the cell contents Left, Centre or Right, icons for Outlining and a drop down menu for changing Styles. Also, there are icons to create a graph, a text box, a picture or a button.

Last but not least, the Excel tool bar has a Σ icon to sum a row or column of cells automatically. (Alternatively, you can use Shift-Command-T.) Resolve does not offer the equivalent of this invaluable feature of Excel 3.0.

Resolve displays only one line in the entry bar. You can type more than one line but if you edit an entry that takes up more than one line, you must click on one of two arrows at the right hand end of the entry bar to display the next or previous line. In Excel, the entry bar automatically expands downwards to display more than one line. (This is a mixed blessing; the expanded entry bar may cover some cells you want to view.)

Both programs scroll quickly but Resolve is slower than Excel for some aspects of screen handling. For example, when I entered the number 100 in an empty cell near the bottom of a large worksheet, Resolve took a perceptible two seconds to display the number in the cell. Excel made a similar entry instantly.

This weakness of Resolve is irritating when you want to make a series of entries in rapid succession. Like Excel, Resolve remembers the keystrokes as you type ahead, but each entry takes a couple of seconds to appear.

There is an option in the Show command in Resolve to display the formula but this does not automatically double the width of the columns as Excel does. If a formula is too long to display, Resolve shows a row of asterisks so you must widen the column to see the formula. With Excel, you simply select all the columns then double click the right border of any column to widen or narrow all the columns to the right width.

To sum up, Resolve has some good features but, in my view, its strengths are outweighed by its weaknesses. Excel is a better buy despite the higher price. But if you prefer Claris programs to Microsoft, you may find that Resolve meets your needs.



Phone Code Locator



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Phone Code Locator gives you the information you need quickly and easily in a new disk format developed for Mac database software. It's the only single-source dialling code directory for telephone and fax, instantly accessing a world of dialling information.

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MacSat II Open Day

Celtip Computers (AppleCentre Kidderminster) and Newcastle Computer Services (Apple Centre Newcastle) are holding a MacSat II Open Day at AppleCentre Kidderminster.

MacSat II is a revolutionary meteorological satellite imaging system, which receives, processes, analyses and displays live pictures of the earth from space on any Apple Mac colour system.

This event will be of particular interest to Geography Departments, Weather Forecasters and Physics Departments. As many UK educational institutions now have at least one Macintosh computer this FREE Open Day will be of interest to many from the education market.

DATE OF EVENT: 2nd March 1992

VENUE: Celtip Computers (see page 51, for address)

TIME: 11am-4pm, Demos on the hour (approx. 45 min.)

EXTRAS: Refreshments

COST: FREE OF CHARGE

CONTACTS: Dave Singleton

John Lethbridge

Celtip Computers

AppleCentre Newcastle

Tel.: 0562 822222

Tel.: 0661 25515



LabVIEW® Developments

Information from National Instruments on LabVIEW

High-Performance Workstations

National Instruments have announced that LabVIEW 2.2, the latest System 7 savvy version of the company's award-winning graphical programming software, and its NB Series plug-in data acquisition boards enhance the new Quadra 700 and 900 computers.

LabVIEW 2.2 takes advantage of several Quadra advanced, high-performance features—features eagerly awaited by engineers and scientists for their demanding data- and calculation-intensive applications. LabVIEW 2.2 significantly reduces the time required to analyse data by generating in-line floating point instructions that take advantage of the Quadra on-chip floating point processing.

Simple calculations execute approximately twice as fast on a Quadra as on a Macintosh IIIfx, analysis functions execute approximately 3.5 times as fast, and graphing functions execute approximately 1.5 times as fast. Because LabVIEW 2.2 executes faster on the Quadra, users can develop much more sophisticated instrumentation application programs; alleviating the need to use more expensive instruments.

LabVIEW 2.2 users can also take advantage of multiple-slot configuration and the increased power per slot of the Quadra machines, to address more demanding applications that require multiple boards. The NB Series boards include functions for IEEE-488 instrument control, plug-in data acquisition, and digital signal processing.

The NB Series boards now take advantage of the new block-mode DMA capability of the Quadra to pass large segments of data directly into memory at extremely high rates. In particular, the NB-DMA2800, an IEEE-488 interface with its own block-mode DMA controller, can provide DMA service to all of the NB Series boards via the company's Real-Time System Integration (RTSI) bus, for precise synchronization of multiple board systems.

In addition, the NB-DSP2300 Digital Signal Processing and Analysis Accelerator board, capable of 33 MFLOPs (million floating point operations per second), can use its own block DMA controller to serve as an independent processor for numerically intensive operations.

LabVIEW 2 is a scientific software system for building high-performance instrumentation and analysis applications. It features a unique icon-based graphical programming language and graphical compiler that provide a flexible, integrated environment for engineering and scientific applications.

LabVIEW uses the intuitive time-proven concepts of front panels and block diagrams for software development. Data can be acquired from GPIB, VXI, or RS-232 instruments, or from National Instruments plug-in data acquisition boards.

LabVIEW 2.2 will be available at the end of October from National Instruments for \$1,995. The NB Series boards are available now from NI, and range from \$245 to \$4,995.

LabVIEW 2 Integrates Test Instruments in New UP/DATE Stations

National Instruments announced that Litton Applied Technology (San Jose, CA) is using LabVIEW 2 graphical programming software to control Litton's new Universal Production/Depot Automatic Test Equipment (UP/DATE).

UP/DATE is a versatile tester for intermediate and depot level maintenance, as well as high rate production. Two tester models are available; one is a radio-frequency (RF) test station and the other is a digital test station. Both are easily programmable for all test applications from component to box level.

UP/DATE automates processes which create, store, retrieve, use and exchange system technical and logistic information.

Engineers can use UP/DATE for a wide range of purposes, from simple automated testing to in-depth engineering analysis and fault diagnostics. An operator interacts with the UP/DATE test stations through a Macintosh IIIfx computer and the Litton Test Station Executive Software.

LabVIEW 2 is integrated throughout the System Software and Application Development Software, two subcomponents of the Test Station Executive software. Within the System Software, LabVIEW 2 functions as the Instrumentation Controller Operating System.

LabVIEW 2 instrument drivers and virtual instruments (VIs) control 15 test instruments in each UP/DATE test station; the user can expand the operating system to include LabVIEW 2 drivers for 15 additional test instruments.

The UP/DATE Instrument Controller Operating System also integrates multiple LabVIEW 2 drivers to generate test methodologies such as transfer curves, pulse characteristics, spur, or mixer products. The Application Development Software is a set of programs used to generate and debug Unit Under Test (UUT) programs. Each UP/DATE system features over 250 LabVIEW VIs and users can develop their own VIs and add them to the UP/DATE system.

"LabVIEW 2 was chosen for UP/DATE because of its ease of use, flexibility, and versatility," remarks Leo Wisneski, Director of Test Technology for Litton. "Using LabVIEW 2, we have developed a highly versatile automatic tester, using a wide range of test program sets, from simple to very complex, in a fraction of the time it would have taken using other software tools."

LabVIEW 2 is a scientific software system for building high-performance instrumentation and analysis applications. It features a unique icon-based graphical programming language and graphical compiler that provides a flexible, integrated environment for engineering and scientific applications. LabVIEW uses the intuitive time-proven concepts of front panels and block diagrams to build software modules called virtual instruments. Data can be acquired from GPIB, VXI, and RS-232 instruments, or from National Instruments plug-in data acquisition boards.

LabVIEW 2 has a complete Instrument Driver Library with high-level drivers for over 150 instruments from a variety of manufacturers. The UP/DATE RF and digital test stations are available now from Litton Applied Technology. Please contact Litton for pricing information.

For more information about the UP/DATE test system, please contact Litton Applied Technology, 4747 Hellyer Ave., San Jose, CA 95150-7012, (408) 365-4724. Fax: (408) 365-4651.

LabVIEW® DSP Developer Toolkit Now Available

National Instruments has announced the availability of the new LabVIEW DSP Developer Toolkit. The new package combines the graphical programming ease of LabVIEW 2 with the power and performance of the Texas Instruments Developer Toolkit for the NB-DSP230X Series digital signal processing and analysis accelerator boards. The complete toolkit reduces total software costs for the NB-DSP230X Series by as much as \$2,490.

LabVIEW 2 is an award-winning graphical programming system for developing data acquisition and control systems. The NB-DSP 230X Series boards for Macintosh II family computers use the Texas Instruments TMS320C30 DSP chip to perform numerical computations much faster than general purpose 680X0 microprocessor of the computer. The DSP Developer Toolkit adds development software for executing time-critical analysis on the NB-DSP230X Series digital signal processing hardware that gives the additional performance needed for many real-time applications.

The LabVIEW DSP Developer Toolkit includes the LabVIEW 2 Software System, the NB-DSP230X Series Analysis Library and Interface Utilities, and the Texas Instruments Developer Toolkit.

Pricing and Availability

The LabVIEW DSP Developer Toolkit is available now from National Instruments for \$2,995. A LabVIEW DSP Developer Toolkit Upgrade is also available for \$1,495 for users who already own LabVIEW 2. The NB-DSP230X Series Analysis Library is available for \$695.

For more information on the LabVIEW DSP Developer Toolkit, or about LabVIEW please contact National Instruments UK — 0635 523545.



Farallon Support for New Macs

The Timbuktu® Power Pack, a network communications package

Farallon Announces Support for New Macs

Farallon Computing, Inc. have announced its support for Apple's new Macintosh computers. Farallon's PhoneNET® Systems products are based on the industry-standard AppleTalk protocol and extend the networking power of the Macintosh for remote and high-end users.

In addition to its PhoneNET software and hardware, Farallon will offer the Timbuktu® Power Pack, a network communications package that expands the productivity of PowerBook users on the road. Farallon extends networking to cross-platform and mobile computer users. PhoneNET PC software and hardware allows a user of a desktop PC or compatible to easily attach a PowerBook to their PC to share information files.

A PC running PhoneNET Talk software networked to a PowerBook can take advantage of the PowerBook System 7 file sharing capabilities. The PhoneNET PC products also enables PC users to access a Mac network's file servers, printers, and other network resources.

Farallon's new Timbuktu Power Pack is designed for Macintosh owners who have purchased portable computers and who need to have access to network services and resources through their desktop Mac.

With the Timbuktu Power Pack, a user can easily operate a remote Macintosh to access information and applications even when that user is on the road. PowerBook users can run Timbuktu over dial-up software included with the Mac to take control of their distant office Macintosh, run power-hungry applications such as multi-user databases, and connect with another Timbuktu user to send files.

The Timbuktu Power Pack consists of licensed software for two computers, two PhoneNET StarConnector devices (the smallest, most convenient connector available) and telephone wiring accessories to help users connect to their organization regardless of their location.

Farallon's Ethernet products support new high-end Macs. Farallon's PhoneNET System brings reliable high-performance networking to Apple's new Quadras, the first Macintosh computers with built-in Ethernet, as well as to Apple's new LaserWriters.

PhoneNET System products include LocalTalk and 10BASE-T Ethernet-speed hardware that lets Quadra users connect to a mixed-speed LAN.

The new LaserWriters with built-in Ethernet can also be added to PhoneNET networks to provide Ethernet and LocalTalk users with instant access to these high quality printers.

Availability

The Timbuktu® Power Pack (SW447) has been available since November 1991. Timbuktu® Power Pack is available through resellers worldwide. The Timbuktu® Power Pack is available in limited distribution.

Farallon customers in Europe, Asia-Pacific and Latin

America should contact their local distributor for pricing and availability. A list of Farallon distributors worldwide can be found by contacting Farallon Customer Service at telephone US (1) 510-596-9000, or fax US (1) 510-596-9023.

Farallon Announces Support of Dial-in AppleTalk Standards

Farallon Computing, Inc. today, at NetworkWorld being held here, announced its support of a forthcoming AppleTalk® networking standard that will let end-users mix dial-up tools and servers from different vendors for improved remote network access.

The standard will result from agreements by the AppleTalk Remote Access Protocol (ARAP) working group.

This is a committee within the Internet Engineering Task Force (IETF) that is made up of Apple Computer, third-party developers including Farallon, and customers who have mixed-protocol internetworks.

"Farallon is committed to working with Apple and other developers to further enhance the AppleTalk network standard," said Reese Jones, CEO and founder of Farallon. "We're pleased that the IETF created a forum to discuss AppleTalk protocol issues, because it underscores the wide acceptance of AppleTalk as an industry networking standard. The creation of open, well-defined standards ensures that Macintosh users will continue to benefit from their multi-vendor AppleTalk networking investments."

Farallon brings its years of routing and remote networking expertise to the ARAP standards discussions. Its products, such as PhoneNET Liaison™ and Timbuktu® software, demonstrate Farallon's commitment to making AppleTalk the best possible wide-area networking solution.

Farallon intends to implement the upcoming ARAP standard in its development of remote and mobile computing products.

Contact: Farallon Computing Trudy Edelson & Tricia Chan 2000 Powell Street, Suite 600 Emeryville, CA 94608 415-596-9100

Optical Storage

Internal Removable Storage Systems for Quadra 900s

MicroNet is now offering a full series of removable storage systems designed to install internally in the new Macintosh Quadra 900.

Included in the offerings is MicroNet's new 3.5-inch, 128 MByte rewritable optical system based on the latest 3.5-inch Sony optical technology. It provides an access time of 38 ms and a fast data transfer speed of 700 KB/sec.

MicroNet is also offering a read only 500 MByte CD-ROM drive, and SyQuest removable cartridge systems available in 44 and 88 MByte capacities with a 20 ms access time.

All MicroNet internal removable for the new Macintosh Quadra 900 include software, power cables, special mounting brackets, and front-mount bezel. They are fully tested and ready to ship.

These systems are also available in external desktop enclosures compatible with the Quadra 700, Classic II, and PowerBook computers.



News from Apple (UK)

Apple price reductions and other recent Press Releases

Macintosh and printer packages to increase market share

The company responsible for most of the PC market's growth last year, Apple Computer, has started '92 with a series of special Macintosh-plus-printer packages in order to further consolidate its market share gains.

Announcing the new promotions, Apple High Volume Product Marketing Manager Jan Edbrooke said, "When we launched the Classic and the LC over a year ago we said we made clear our intention to be aggressive in the marketplace, offering Macintosh power and ease of use at very competitive pricing in order to secure market share gains. To date that strategy has been extremely successful, with the Macintosh Classic becoming the best selling business computer ever. We are continuing in that vein, offering even better value to our customers. Today's announcements show that Apple is serious about becoming the leader in the personal computer marketplace."

Effective immediately, until the end of March, the following promotional packages are available (all prices SRP, not including VAT):

Macintosh Classic 2/40 with StyleWriter	£895
Macintosh Classic 4/40 with StyleWriter	£995
Macintosh Classic II 2/40 with StyleWriter	£995
Macintosh Classic II 4/40 with StyleWriter	£1095
Macintosh Classic II 4/80 with StyleWriter	£1295
Macintosh LC 4/40 with 12" Colour Monitor	£1235
Macintosh LC 4/40 with 12" Colour Monitor and StyleWriter at 10%-off	£1500
Macintosh LC 4/40 with 12" Colour Monitor and Personal LaserWriter LS at 10%-off	£1975
Macintosh LC 4/80 with 12" Colour Monitor	£1535
Macintosh LC 4/80 with 12" Colour Monitor and StyleWriter at 25%-off	£1755
Macintosh LC 4/80 with 12" Colour Monitor and Personal LaserWriter LS at 25%-off	£2155

Issued by Apple Computer, January 1992.

New 16" Colour Display For High Performance Macs

Apple Computer UK Ltd have introduced the Macintosh 16" Colour Display.

The display complements Apple's high-performance Macintosh personal computer line — particularly the recently announced Macintosh Quadra 700 and 900 models. Both Quadra models can support the new display at up to 24 bits per pixel (photo-realistic colour) with built-in video capabilities.

This new mid-size monitor is easy to view and comfortable to use. It has a display area (832 x 624 pixels) which offers 70% more work area than that of 13" monitors. It features ADB (Apple Desktop Bus) ports, microphone and headphone ports in its base.

The display also features a full tilt/swivel base and an anti-glare, anti-static screen to cut glare and dust build-up.

The vertical refresh rate is 75Hz which eliminates flicker. All user controls are at the front for easy accessibility. The display complies with the Swedish MPR2 guidelines for low frequency magnetic emissions.

"We believe the 16" Colour Display is an excellent choice for customers who purchase high-performance Macintosh," said Pamela Schure, Peripherals Marketing Manager, Apple Computer UK.

She continued, "Its combination of screen performance and ergonomic features are well suited for any customer using their computer with applications in business productivity, desktop publishing, and multimedia creation. With its competitive price and large screen colour, we expect to see many of our mid-range and high-end customers move to this new mainstream display size."

The Macintosh 16" Colour Display features a Sony Trinitron picture tube that delivers sharp, crisp images in vibrant colour. It is designed to offer the best combination of focus, brightness, contrast and uniformity available in a mid-sized colour display.

The display is supported by all current Apple video cards and the on-board video of the Quadra CPUs. The Display Card 8•24 will offer 256 colours (or 8 bits per pixel), while the Display Card 8•24 GC will offer 32,768 colours (or 16 bits per pixel), along with graphics acceleration.

The Macintosh Quadra 700 and 900 both support the new 16" display at up to 24 bits per pixel when configured with additional VRAM. They will support the 16" display at 256 colours (8 bits per pixel) as a standard feature.

The Macintosh 16" Colour Display ships with an attached video cable, a power cable (for connection to the CPU), one ADB cable, and two sound cables.

The new display will be available in February through authorised Apple dealers.

The manufacturer's suggested retail price is £1195.

Issued by Apple Computer, January 1992.

...and the Rumours...

What you may see after April, as reported in the U.S.A. (No comments from Apple — on either side of the Atlantic).

- One of The Monkees, Davy Jones, has been hooked by the Mac. He'll be collaborating with designer Alan Green to produce a book documenting the history of the TV series which was popular in the Sixties... Those Macs get everywhere!

And, as for Apple-related rumours...

- Standard 4 Mbytes of Memory in CPU's (what a great idea)
- Phasing-out of the old LC in favour of a new 68030 LC With 4 bytes of memory — which will indicate that Apple now understands the need for 4 bytes as a basic start.
- An upgraded Quadra
- A new LaserWriter
- A Colour Portable (or should we say 'PowerBook'?)
- PowerBook 100 4/40
- New CD-ROM drives
- Phasing-out of some products, more price cuts and some surprises (Apple needs some of them?).

We'll just have to wait, and see what actually happens as the year progresses!



Peripheral Upgrades

Apple announces upgrades to its peripheral range

Apple Computer UK Ltd have announced a series of upgrades to four of its high quality peripherals products. Upgraded products include the Apple Personal LaserWriter LS Software; the 8•24 GC Card; the Apple StyleWriter; and the Apple OneScanner. The Apple 21" Colour Display has been reduced in price by £200 from £3295 to £3095 (+VAT).

All these products and upgrades are available from Apple Authorised Dealers.

For further customer information please dial 100 and ask for Freefone Apple.

Apple StyleWriter

— now printing 3 times faster; new TrueType fonts

The Apple StyleWriter software upgrade includes a new printer driver allows the StyleWriter to print up to three times faster. In addition, Apple will ship seven new TrueType font families with the StyleWriter, including: ITC Avant Garde, ITC Bookman, New Century Schoolbook, Helvetica Narrow, Palatino, ITC Zapf Chancery, and ITC Zapf Dingbats. The new software and fonts are fully compatible with System 7. This follows the introduction last September of background printing capabilities.

The StyleWriter is a compact professional quality printer for the Apple Macintosh. The StyleWriter printer is an excellent choice for those who want laser-quality printed results for personal or business correspondence.

The new TrueType fonts bring the StyleWriter total to fifteen font families or 31 individual typefaces which can be smoothly scaled to any size on the printed page or screen. Other fonts included are: Times, Courier, Helvetica, Symbol, Chicago, Geneva, Monaco, New York.

The new software and fonts will ship in February. The StyleWriter's suggested retail price remains unchanged at £295 + VAT. Existing StyleWriter owners can upgrade to the new printer driver and additional fonts.

Apple Personal LaserWriter LS

— new fonts; improved installation

The software upgrade for the Personal LaserWriter LS includes seven new font families and improved installation software. The new fonts are: ITC Avant Garde, ITC Bookman, New Century Schoolbook, Helvetica Narrow, Palatino, ITC Zapf Chancery, and ITC Zapf Dingbats. Apple has also improved the installation of fonts, driver and printer software with a new, one button easy-to-use installer.

This follows the announcement of a 20% faster printer driver for this printer last September. The Personal LaserWriter LS printer is designed for demanding individual use providing users with outstanding printed results for both text and graphics. The new fontset is fully compatible

with System 7 and virtually all software applications.

The new software will ship with the Personal LaserWriter LS in February. The printer's suggested retail price remains unchanged at £825 + VAT. Existing Personal LaserWriter LS owners can obtain this as an upgrade.

Apple OneScanner

— improved compression; QuickTime included; scanning operation enhancements

The new software for the Apple OneScanner includes Ofoto 1.1 and a revised instruction manual. Ofoto 1.1 incorporates support for QuickTime image compression abilities. Users can compress and decompress still images and save them as files which are up to 10 times smaller. The QuickTime system software extension is included with the new software. Other enhancements include an "auto sharpen" command, a simplified calibration process, and better access to the "image-type" control.

QuickTime provides various compression choices, including the Joint Picture Expert Group (JPEG) industry standard method of image compression. QuickTime also makes the opening and decompression of compressed files saved in the standard PICT format automatic in all Macintosh applications. The other enhancements refine the user interface of the scanning software and improve the quality of scanned images.

The new software will ship with the Apple OneScanner in February. The scanner's suggested retail price remains unchanged at £1,095 + VAT. Existing Apple OneScanner owners can obtain the new software through Authorised Apple Dealers.

Macintosh 8•24 GC Card

— full System 7 compatibility, improved monitor support

The Macintosh™ 8•24 GC Card has been upgraded to include new features in both hardware (a new ROM) and software. Hardware features include 16" Colour Display support for 32,000 colours (16 bits per pixel), and 6500K page-white feature for the 16" and 21" colour displays. The software makes the GC card fully System 7 compatible.

For existing GC card owners, there is a software upgrade for System 7 compatibility and the 6500K page-white feature for the 16" and 21" Colour Displays. The QuickTime extension will be available in March. No new ROM is required. Purchasers of the Macintosh 16" Colour Display will need to have their card upgraded to the new ROM in order to use the GC card to drive the display.

With these enhancements, the Macintosh 8•24 GC Card offers fully integrated graphics acceleration for the Macintosh environment, providing both QuickDraw and QuickTime support. Because the acceleration hardware and software are integrated with the Macintosh system software, the 8•24 GC card provides users with exceptional performance in a wide variety of applications such as graphics design, publishing layout, 3-D modelling, video editing, and animation production.

The new 8•24 GC card will be available from February, the card's suggested retail price is £1,345 + VAT. Existing owners of the 8•24 GC card can upgrade their hardware (new ROM) by contacting the nearest Authorised Apple Dealer. (Upgrade necessary only for 16" Colour Display support.) Users can upgrade to the new System 7 compatible software through Authorised Apple Dealers.

Issued by Apple Computer, January 1992



Userland Frontier

'The power Behind the Icons' : Press Release

Major Discovery

Macintosh has an Operating System!

It may come as a surprise that underneath all its pretty icons, the Macintosh has a real operating system that rivals minicomputer and mainframe operating systems in depth and flexibility. With System 7, it has even more gutsy power. Without Frontier, there was no way to tap that power.

If you can do it in the Finder...

...you can probably write a Frontier script that automates it. Frontier fills the gap that's always existed on the Macintosh — no system-level scripting language. Power users can simplify the system for less sophisticated users. Frontier is just like "batch" or "shell" languages on character-based machines, with the graphic difference. You can write scripts to automate all the repetitive dragging and clicking you'd do in the Macintosh Finder.

If you can use a spreadsheet...

...you can customize your Mac desktop with Frontier. Or, if you have experience writing HyperTalk scripts, dBASE applications, MS-DOS batch files or Unix shell scripts. Frontier is a gutsy script development system, so the more experience you have programming, the more power you'll get from Frontier.

If you ever think about how you use your Macintosh, then Frontier is for you.

Features

- Scripts can be launched from the Finder desktop, from Frontier's user-editable menu bar, or from compatible application software. Or run as background processes or "agents."
- The most complete and powerful scripting language available on any desktop computer.
- Scripts can send interapplication messages to System 7-compatible software, including the System 7 Finder.
- Over 350 built-in verbs offer complete file management, text processing, system operations and much more.
- Built-in, fully scriptable word processor and outline processor.
- Complete outline-based script editor and debugger.
- Frontier's object database allows scripts to communicate with each other and store information permanently. It's a combined language symbol table and computer filing system. Great for network server applications.
- Over 100 sample scripts get you started and show you how to make Frontier perform.
- 700-page combined User's Guide and UserTalk Reference Guide written by Dan Shafer, noted scripting expert and Frontier-script writer. On-line DocServer application documents all Frontier verbs.
- CompuServe forum for script writing support. Enter GO USERLAND at any CompuServe ! prompt.

System Requirement

- Requires Macintosh System 7.0 or higher.
- 1024K RAM.
- A hard disk.
- Compatible with AppleShare and System 7.0 File Sharing.
- Print on all Laser-Writer and ImageWriter compatible printers.

The Importance of Apple Events

While both Frontier and System 7 were in development, UserLand consulted with Apple Computer to be sure that their operating system would support UserLand's vision for scriptable applications. The resulting technology, known as "Apple Events"

is a perfect fit for Frontier script writing. As more developers add interapplication Apple Events to their software, Frontier scripts will be able to do more and more.

Benefits

- For the first time you can customize, automate and simplify Macintosh operating system, file system and System 7-compatible application software.
- Because Frontier lives outside any application, you can write scripts that combine the features of several programs.
- You learn one language. With Frontier you won't have to learn a different language to write scripts for each of your programs.
- For the first time you can write scripts to drive graphics, page layout, file management, electronic mail and utility software.

Availability

For more information, contact:
UserLand Software, Inc., 490 California Avenue, Palo Alto, California 94306, USA.
Tel: (415) 325-5700. Fax (415) 325-9829
AppleLink: USERLAND.DTS, CompuServe: GO USERLAND

TypeStyler

'More power at a lower cost'

TypeStyler the powerful easy to use type manipulation application has been upgraded to version 2.0. At the same time the price will be lowered to £149.50.

Version 2.0 is System 7.0 compatible and offers balloon help, publish and subscribe and True Type support. It is also compatible with Apple Events and is 32 bit clean.

Improved Performance: TypeStyler 2.0 offers improved screen rendering time. Complex effects such as Three D block shadows and Zoom effects can be created on screen much more rapidly than in previous versions.

Adobe Type Manager is now bundled with TypeStyler 2.0. ATM allows users to display smooth, quality text at any size and print out at a high resolution to either a PostScript or non-PostScript printer. In addition to ATM, TypeStyler 2.0 users will receive 13 typefaces from the Adobe Type Library.

Letter Fusion: Letter Fusion is a powerful feature which "fuses" individual letters together and applies styling effects to the entire text object. This means that effects are applied across all of the characters as if they were a single character. Letter Fusion is applicable to all fill effects, even across multiple lines and to an object's outline for creating popular contouring effects.

Double Beziers: TypeStyler 2.0 provides the option of having each shaper line comprised of two separate Bezier curves, instead of one, allowing increased precision and unique shaping capabilities. TypeStyler 2.0 also adds ten new shapes to the Shape Library based on the Double Bezier option.

On-the-Fly Font Conversion: If TypeStyler 2.0 is running under System 7, or if the TrueType INIT is installed, TrueType fonts will be converted on-the-fly without using the Font Converter. Similarly, PostScript Type 1 fonts are converted on-the-fly if ATM 2.0 or higher is installed. The Font Converter remains in TypeStyler 2.0 so that Type 3 outlines can be converted to SmoothfontTM format.

Professional Colour Support: TypeStyler 2.0 supports 24 bit colour, providing access to a palette of over 16 million colours on a Macintosh with a 24 bit colour card. For a Macintosh LC with 12 inch monitor and optional VRAM upgrade, 16 bit colour is supported. In addition TypeStyler's 8 bit colour support has been improved to create superior on-screen graduated fill effects which approach 16-bit and even 24-bit quality, but using 8-bit equipment. Users can also select between RGB or CMYK colour models, perform true spot colour separations and create individualised custom colours.

For further details contact Adrian Goodman on 0734 502556.



What's Yours?

If you have any better ones, we want to hear from you:
by Dan Gutman

Before computers (B.C.), kids used to come to school without their homework and tell the teacher, "My dog ate it". In our more advanced society, kids come to school without their homework and tell the teacher, "My disk drive ate it".

Before computers, college kids used to come to class without their assignments and tell the professor, "Sorry, man, bad karma". In our more advanced society, college kids come to class without their assignments and tell the professor, "Sorry, man, bad software".

The personal computer, with all of its quirks and frailties, is revolutionizing education in a manner which nobody predicted: it is providing a mother lode of new excuses that previous generations couldn't have even imagined.

For the sake of the unfortunate students faced with an evil teacher staring them in the face and asking, "Why haven't you turned in your homework?", I have prepared a list of responses that might get you off the hook:

- "My computer crashed."
- "I ran out of printer paper."
- "I forgot to make a backup copy."
- "I spilled a Coke on my keyboard and it was useless."
- "My parents had to use the computer to do their finances."

- "My father was playing Dungeons and Dragons all night and threatened to hack me to pieces if I tried to use the computer."
- "My little sister yanked out the power cord and I lost everything."
- "I did my homework, but I ran out of printer ribbons, so I couldn't print it out."
- "I couldn't turn on the printer because it would wake-up my little brother."
- "I had to go to my user group meeting last night."
- "There was an electrical storm that zapped my hard drive."
- "I went temporarily blind from staring at my VDU too long."
- "My desk isn't ergonomically correct, so I couldn't do my homework without risking serious injury."
- "You didn't get it? I sent it to your electronic mailbox."
- "My computer and I are incompatible."
- "My little sister used all my disks to make an arts and crafts project."
- "I can't type on a QWERTY keyboard. I learned the DVORAK method."
- "I ran out of space on the disk, and the computer store was closed so I couldn't buy new ones."
- "My laser printer went bonkers and burned a hole through the ceiling."
- "Homework? What homework? I have it in my database that you didn't assign us any homework last night."
- "Would you believe it? I hit the wrong key and erased the file."
- "I broke my back trying to carry home the new issue of MacWorld magazine."
- "Somebody planted a virus in my computer and I had to spend the whole night debugging it."
- "I had to spend the whole night helping the FBI catch a guy who planted a virus in the Pentagon computers."
- "I got caught planting a virus in the Pentagon computer system and had to spend the whole night in jail."

Reprinted from Apple Sac News Journal of the Apple Users Group of Sacramento, CA.

Photoshop 2.0.1

Update ships

Adobe Systems has announced Adobe Photoshop 2.0.1 software, a new update to its award-winning photo design and image retouching program for Apple Macintosh computers.

The update provides full compatibility with Apple's new Quadra series of computers and includes Adobe Type Manager (ATM) 2.0.3 software which is also compatible with the new computers. Version 2.0.1 also contains four new plug-in modules which give Adobe Photoshop the ability to export paths created with the pen tool (with the *Paths to Illustrator* module); to add special photographic highlights (with the *Lens Flare* filter); to import object-oriented PICT files with soft edges (with the *Anti-Aliased PICT* module); and to compress images using the industry standard Joint Photographic Experts Group (JPEG) compression scheme. In addition, JPEG compression/decompression of

Adobe Photoshop PICT files is automatically available to users of Apple's new QuickTime software.

"With the new features in version 2.0.1, we have increased Adobe Photoshop's synergy with Adobe Illustrator software and with the PostScript language", said Adelheid van der Werf, European product manager for Adobe's Application Products Division. "Artists can create some remarkable effects with the new *Paths to Illustrator* module. Users of PostScript Level 2 printers, like the LaserWriter IIg, will appreciate having their JPEG-compressed files decompressed directly by the printer."

The minimum system requirements for Adobe Photoshop 2.0.1 are an Apple Macintosh computer (Classic family, SE family, II family, LC or Portable) with System software 6.0.4 or later (including System 7), 2 megabytes of RAM and a hard disk. A colour monitor, 4 megabytes of RAM, and a 68020 (or greater) processor is recommended.

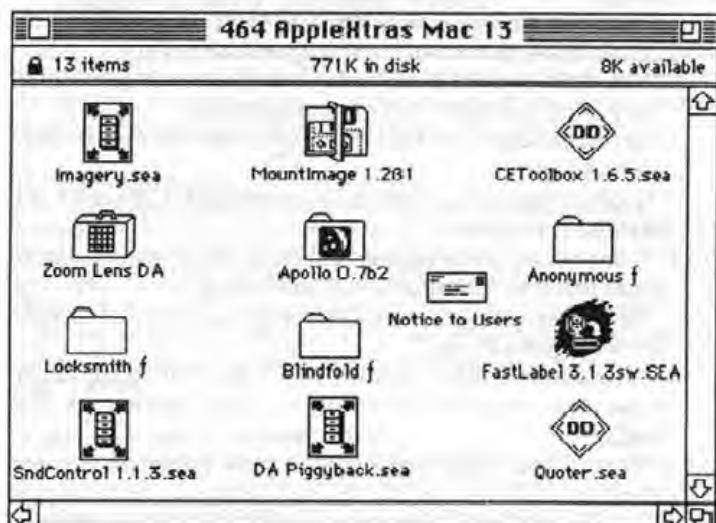
Adobe Photoshop 2.0.1 is available immediately from all Adobe authorised retailers. The suggested retail price remains £725. Registered Adobe Photoshop 2.0 users will be sent the new update free of charge.

For further information, please contact Adobe Systems UK, Tel: 0815471900.

Issued by Adobe Systems, January 1992.



AppleXtras Mac 13



Imagery is a simple utility which converts a range of graphics files from the IBM PC, Atari ST and Amiga computers. The program generates standard TIFF files in TIFF 4.0/5.0 format compatible with Freehand, Digital Darkroom, Superpaint and many other drawing and editing programs.

SndControl is designed to complement the Sound cdev (control panel device) distributed with Apple's System Software. It allows you to associate a different sound to a total of 15 distinct actions instead of just the beep.

LockSmith allows you to lock or unlock files, folders, and disks quickly and easily without the trouble of the Finder's Get Info windows.

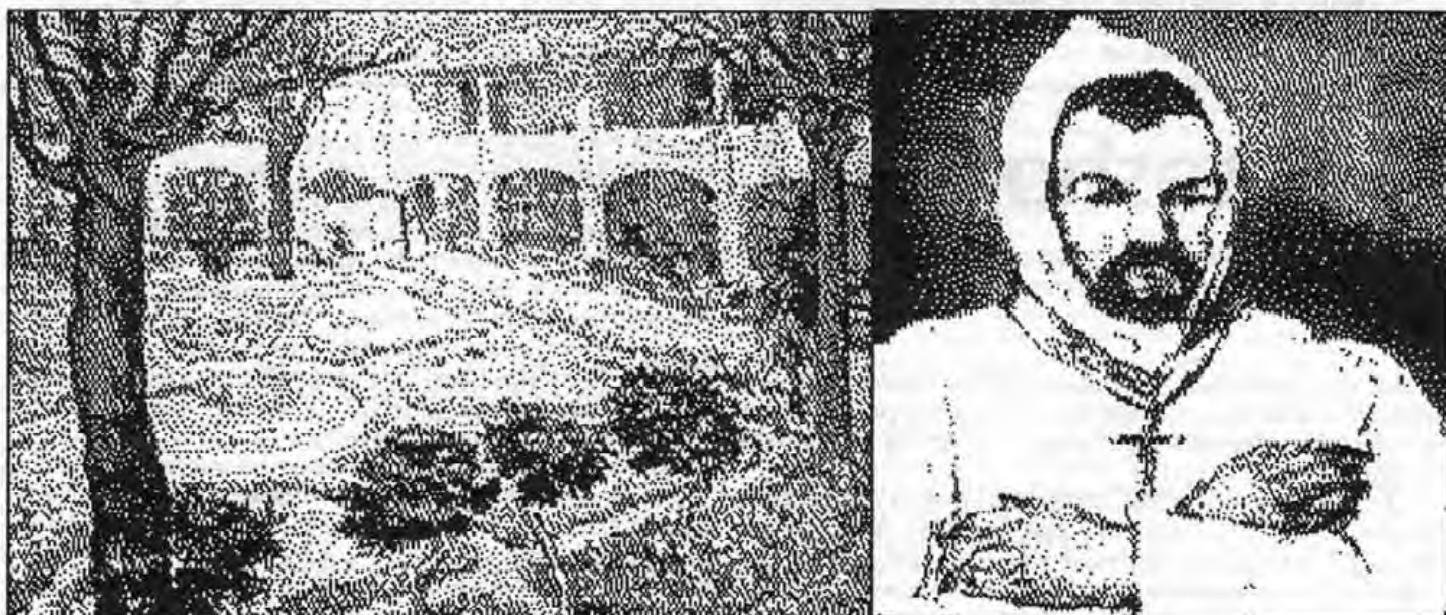
Blindfold allows you to hide or show icons in the Finder. So you can hide files you don't want to see or don't want seen. And they can be easily shown again when you want them.

CE Toolbox is used with many programs from CE Software. It provides easier access to these programs by adding their names to the Apple menu. Also, the user-configured hot keys provided with these programs utilize information provided by CE Toolbox to access and open the correct windows on your screen.

Mac Library

ArtGame1.9p

ArtGame1.9p



Vincent Van Gogh

"Garden of the Hospital at Arles"

May 1889 29 x 36 inches

Collection O. Reinhart, Winterthur (Switz.)

Paul Cézanne

"Uncle Dominic as a Monk"

About 1866 26 x 21 inches

Collection Ira Haupt, New York

DISK465 THE ART GAME STACK

Adventure Stack

466 HC II Games

5 items 780K in disk 6K available

Adventure Stack, Dungeon Curator, Criminals, AnimalYear, Notice to Users

467 HC II Games

8 items 767K in disk 19K available

DragonSword, Frustration 2.0, Puzzles, American Gothic, Concentration, Creator 2.1, HyperMATRIX, Notice to Users

Try talking to it

Shoot it

DISK466 GAMES FOR HYPERCARD II

DISK468

Disk 468 contains a demo version of the 'virtual reality' program
VIRTUS WALK THROUGH

468 Virtus WalkThrough™ Demo

2 items 395K in disk 391K available

Virtus WalkDemo, Virtus WalkThrough™.Doc

YOU ARE AT A CLEARING IN THE DARK FORREST OF GLOOMOOLA.

DISK467 GAMES FOR HYPERCARD II

469 System 7 Tune-Up

5 items 695K in disk 91K available

Read Me, Installer, Notice to Users, Tune-Up Parts, Install System 7 Tune-Up

DISK 469 SYSTEM 7 TUNE-UP

In a continuing effort to provide you with the best possible system software, System 7 Tune-Up is a set of software enhancements that make your Macintosh computer work better with System 7 (version 7.0 or 7.0.1). Once you have installed System 7 Tune-Up, you will notice that:

- Memory is managed better, resulting in fewer "out of memory" messages.
- Printing is faster and more reliable.
- There is more memory available for application programs on computers that are not connected to a network (such as a PowerBook computer being used on the road).

DISK 470 CLARISWORKS DEMO

The ClarisWorks Demonstration Version is a fully working version of ClarisWorks except for the following restrictions:

- Files cannot be saved.
- Printed documents have a "demonstration" watermark in the foreground.
- This Demonstration Version does not include the ClarisWorks spell-checker, thesaurus, online help, communications tools, or the full set of XTND translators (4 of the 21 are included).

The ClarisWorks Demonstration Version requires:

- Macintosh Plus, SE, Classic, LC, PowerBook, Quadra or II family computer.
- 1MB RAM and System 6.0.5 or higher, or 2MB RAM and System 7.0 or higher.
- Two floppy disk drives, or a hard disk drive.

470 ClarisWorks Demo

6 items 781K in disk 4K available

ClarisWorks Demo, Read Me, Claris Translators, Claris XTND System, ClarisWorks Translators, Sample Documents

MacTCP 1.1

The Transmission Control Protocol/Internet Protocol (TCP/IP) protocol suite.

Apple Computer, Inc. is shipping an updated version of its MacTCP software, a standard development platform that allows developers to create Macintosh applications and solutions for network environments using the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol suite.

TCP/IP is a set of standards used widely in universities, government institutions and large businesses for networking heterogeneous enterprise-wide systems, and is considered one of today's leading standards-based networking environments.

Apple's MacTCP 1.1 now supports Macintosh Plus and later models of Macintosh personal computers running System 7, the newest version of the Macintosh operating system, while maintaining backwards compatibility with Macintosh system software since version 6.0.5. Having MacTCP 1.1 enables Macintosh computers running System 7-compatible TCP/IP applications to be integrated into TCP/IP networks. For example, MacX 1.1.7, Apple's most recent version of its X Window display server product, will be System 7 compatible and will use MacTCP 1.1 to operate in a TCP/IP network environment. MacX 1.1.7 will be available in October.

With MacTCP 1.1, third-party developers can now create TCP/IP applications that take advantage of the benefits of System 7 (including new Finder features, virtual memory, interapplication communication and file sharing) and several additional TCP/IP features. The most significant of these new TCP/IP features are support for alternate Link Access Protocol (LAP) modules and "PING" applications.

A new reference document, "Building Link Access Protocol Modules for MacTCP," explains how developers can create solutions in which Macintosh-based TCP/IP applications operate over alternate LAPs. Such alternative LAPs include Token Ring (IEEE 802.3), Serial Line Internet Protocol (SLIP)—RFC 1055, and Point-to-Point Protocol (PPP)—RFCs 1171 and 1172. The document is available to Apple Partners and Apple Associates through the Developer's CD Series.

Applications supporting PING will enable Macintosh users on a TCP/IP network to determine whether resources such as host computers are connected and accessible. An application with PING lets the application, end user or network administrator quickly conduct a preliminary check on the availability of network resources.

MacTCP 1.1 also complies with RFC 1122 ("Requirements for Internet Hosts—Communication Layers"). This ensures MacTCP conforms with the interoperability standards established by the Internet Engineering Task Force (IETF), the standards-setting organization for the TCP/IP protocol suite.

As with previous releases of MacTCP, MacTCP 1.1 supports concurrent TCP/IP and AppleTalk operation over either Ethernet or LocalTalk-compatible systems. This preserves full access to AppleTalk services while users are

connected to a TCP/IP network. MacTCP also supports multiple simultaneous TCP/IP services.

MacTCP version 1.1 is available immediately at the same price as version 1.0.1 through APDA, Apple's source for development tools. The MacTCP 1.1 Developer's Kit, which includes a single-user license, software and documentation, is offered at the manufacturer's suggested retail price (MSRP) of \$100. The Documentation Kit (documentation only) is available for the MSRP of \$60. For product ordering information, contact APDA at 800-282-2732 (U.S.), 800-637-0029 (Canada), or 408-562-3910 (International).

Developers may obtain a multi-user license for MacTCP through Apple's Software Licensing Department. The MacTCP Commercial Distribution license, available for \$5000, allows developers to redistribute the MacTCP drivers and the MacTCP Administrator's Guide commercially. The MacTCP Internal Use license, available for \$2500, covers only internal company use and redistribution of the drivers and guide. Under either license agreement, developers will also receive the MacTCP Developer's Kit. For more licensing information, contact Apple's Software Licensing Department at (408) 974-4667.

MacTCP Software Details

With MacTCP software, developers can create Apple Macintosh applications and solutions for network environments that use the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol suite—a set of standards widely used for networking heterogeneous systems. MacTCP implements the User Datagram Protocol (UDP), TCP, and IP protocols, and conforms to Internet RFCs and MIL-STDs. This conformity ensures interoperability with systems on the TCP/IP Internet. MacTCP is co-resident with the AppleTalk protocols and runs over both Ethernet- and LocalTalk-compatible cable systems. It can be installed on a Macintosh Plus or later model Macintosh computer and is compatible with either system software version 6.0.5 (or later) or version 7.0.

Features

- TCP/IP protocol driver implementation
- Compatible with Macintosh Plus or later model Macintosh computers
- Concurrent TCP/IP and AppleTalk operation
- Both C and assembly language interfaces
- Address configuration using the Control Panel Interface
- Apple-supported driver

Benefits

- Provides a standard platform for developing TCP/IP applications and solutions.
- Lets third-party developers create applications that can run on a range of Macintosh computers.
- Preserves full access to AppleTalk services. For example, users can run MacTCP while printing to an Apple LaserWriter over LocalTalk cable.
- Provides developers with a familiar development environment.
- Simplifies installation & setup procedures for users and network administrators.
- Makes technical assistance available for certified Apple developers.

MacTCP consists of object code libraries and associated files for both C and assembly language development. Libraries include TCP and UDP interfaces along with a name-to-address resolver. A programmer's reference guide and



an administrator's guide are provided. The MacTCP driver allows for the addition of other data link layers through the use of a link layer interface between the IP layer and the data link layer of MacTCP. Examples of these data link layers include Token Ring (IEEE 802.5), Serial Line Internet Protocol (SLIP)-RFC 1055, and Point-to-Point Protocol (PPP)-RFCs 1171 and 1172. The link layer interface is described in the reference document Building Alternate Link Access Protocol Modules for MacTCP available to Apple Partners and Apple Associates through the Developer's CD Series.

MacTCP implements the following protocols:

- IP (RFCs 791, 894; MIL-STD 1777)
- UDP (RFC 768)
- TCP (RFC 793, MIL-STD 1778)
- ARP (RFC 826) • RARP (RFC 903)
- ICMP (RFC 792)
- BootP (RFCs 951, 1048)
- RIP (IDEA004)
- DNS (RFCs 1034, 1035)
- Internet Subnetting (RFC 950)
- Internet Assigned Numbers (RFC 1010)

MacTCP complies with Requirements for Internet Host-Communication Layers (RFC 1122). Throughput is 3.0 megabits per second memory-to-memory (on a Macintosh II-family computer over Ethernet).

MacTCP is available for evaluation as a single-user Developer's Kit. The documentation can also be purchased separately.

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Downloaded from Applelink

NetMinder® Ethernet 2.0 adds new features to facilitate network problem solving

Neon Software, Inc. announces NetMinder Ethernet Version 2.0. The new version of this network analyzer for the Macintosh incorporates a number of powerful new features to facilitate network problem-solving and a streamlined new user interface. Version 2.0 introduces an Explain button which provides context-sensitive help to users about each of the protocol types decoded by NetMinder.

New protocol and address-mapping features make identification of network traffic easier. Real time display of network data enables users to check packets and identify problems on-the-fly. Other new features include decode of SNMP and the support of several additional Ethernet cards. Finally, NetMinder Ethernet 2.0 is packaged with several configuration files which automatically discover many types of network problems common to AppleTalk Ethernets.

NetMinder Ethernet is a software-only network analyzer which troubleshoots, debugs, and monitors Ethernet networks. Running on any Macintosh Series II, SE/30, or SE equipped with a compatible Ethernet card, NetMinder Ethernet includes features such as packet filtering, post-filtering, triggering, and traffic alarms previously found only in hardware-based analyzers. Protocol suites decoded include AppleTalk, TCP/IP, XNS, DECnet, Netware, and Bridge/3Com. Neon Software began shipping NetMinder Ethernet in June of 1990. The addition of several important new features in release 2.0 demonstrates the increased

demand by network managers for high-performance management tools which run on the Macintosh. Many features included in the new release facilitate network problem-solving by providing the user with additional information about individual packets.

An "Explain" button helps users determine the significance of a decoded packet. This feature presents the user with an explanation of the type of protocol decoded and what it may indicate about network operations. The feature is particularly useful for users new to network analysis because it quickly familiarizes them with various protocol types.

New mapping features in Version 2.0 make identification of network traffic easier. A default hardware map is used to identify the manufacturer type of the device associated with a packet's source and destination address. Another new mapping feature gives the user the ability to display alternate levels of address and protocol type according to the level of detail desired.

For example, if most of the traffic coming across the network is from AppleTalk nodes, the user may want to display addresses by net and node number instead of by Ethernet address. This feature allows users to quickly identify patterns and get a better overview of network traffic.

Decode of SNMP (Simple Network Management Protocol) has been added to version 2.0 in preparation for increased amounts of SNMP traffic on AppleTalk networks and due to demand from customers in mixed protocol environments.

Other protocols within the IP protocol suite decoded by NetMinder Ethernet include TCP, UDP, ICMP, RIP, and KIP. NetMinder Ethernet also decodes MacIP in the AppleTalk protocol suite. Support for several new Ethernet cards including the Dayna DaynaPort II/E, Sonic Systems Ether II and TwPPII, TechWorks NuBus Ethernet card, and the Tri-Data LanWay E10T has also been added to the new release.

Finally, NetMinder Ethernet 2.0 ships with several configuration files or "templates". The configuration files have pre-defined filters, triggers, and graphs which automatically discover certain types of network problems. By loading these files, users can ask to be warned of the occurrence of certain pre-defined events or can customize them for use on their own network. Configuration files can be used to identify packet storms, router problems, and excess traffic or error levels.

NetMinder Ethernet 2.0 is priced at \$595 and is available beginning November 15 through dealers, internationally through distributors, or directly from Neon Software. Registered users can upgrade from any other version of NetMinder Ethernet for \$75.

Customers ordering between October 9 and November 15 will receive NetMinder Ethernet 1.2 at its current price of \$495 and will be sent the 2.0 upgrade at no charge. NetMinder Ethernet can also be purchased as part of the Neon Software Network Management Series. Other products included in the series are NetMinder LocalTalk and RouterCheck.

The bundled package gives AppleTalk network administrators the ability to troubleshoot network problems and optimize network performance. While the NetMinder products are used to diagnose network trouble at the packet level, RouterCheck profiles and monitors routers, bridges, and gateways anywhere in the internet. Beginning November 15, list price for the series will be \$1,395.

Contact: Neon Software, Inc. Elyssa Edwards 1009 Oak Hill Rd. Suite 203 Lafayette, CA 94549 Tel: 415-283-9771 Fax: 415-283-6507



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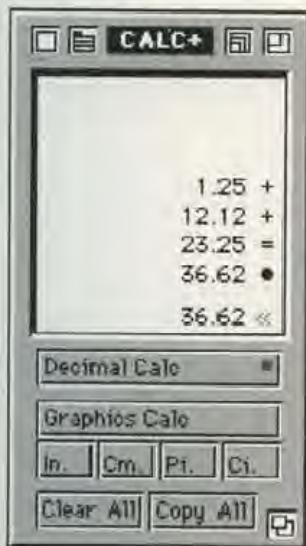
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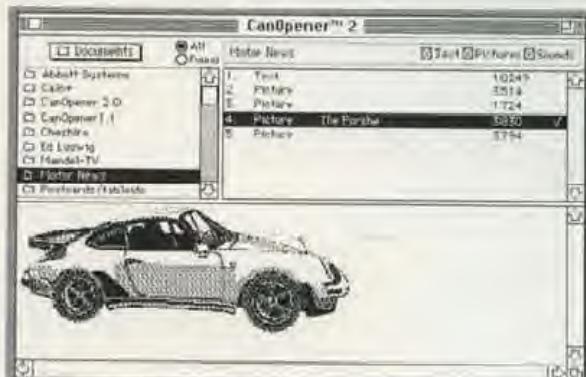
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